

Fig. A. A relief map of Switzerland. Find Switzerland on Figures 110-A and 112-B. Pages 109 and 112 contain a very good description of this country.



Fig. A. The tall mountain which you see in the picture is the Matterhorn. It is one of the most beautiful of the Swiss mountains. Down in the valley is the Swiss town of Zermatt. People like to visit Zermatt for winter sports. See Figures 127-A, 128-A, and 129-A.

LIFE IN MOUNTAINS— THE SWISS

GOING TO SWITZERLAND

This will be a trip to a land of many, many interesting and beautiful scenes. As we travel, we shall stop at five or six places and sketch pictures to take home with us. Be sure to name every picture. Perhaps we shall color some of the pictures. Maybe when they are finished, we shall collect all the pictures into a booklet. What title should we give the booklet?

We can go all the way from New York to Switzerland by boat. In about eight days a fine, big passenger steamer will carry us from New York to Rotterdam, a city on the river Rhine near its mouth. How different is the Rhine River from the Amazon

River! The Rhine, like the Amazon, has low islands made of the mud that the river has brought down; but it is very unlike the Amazon, because these islands at the mouth of the Rhine have all been made into farms. We shall study about them in another chapter that tells about Holland.

At Rotterdam we can change from our ocean steamer to a river steamboat, a Rhine steamer. For several days the river boat takes us upstream. Here there is not much to



Fig. 106. This is a relief map of Europe. It shows the kinds of surface which the continent has.

106-1

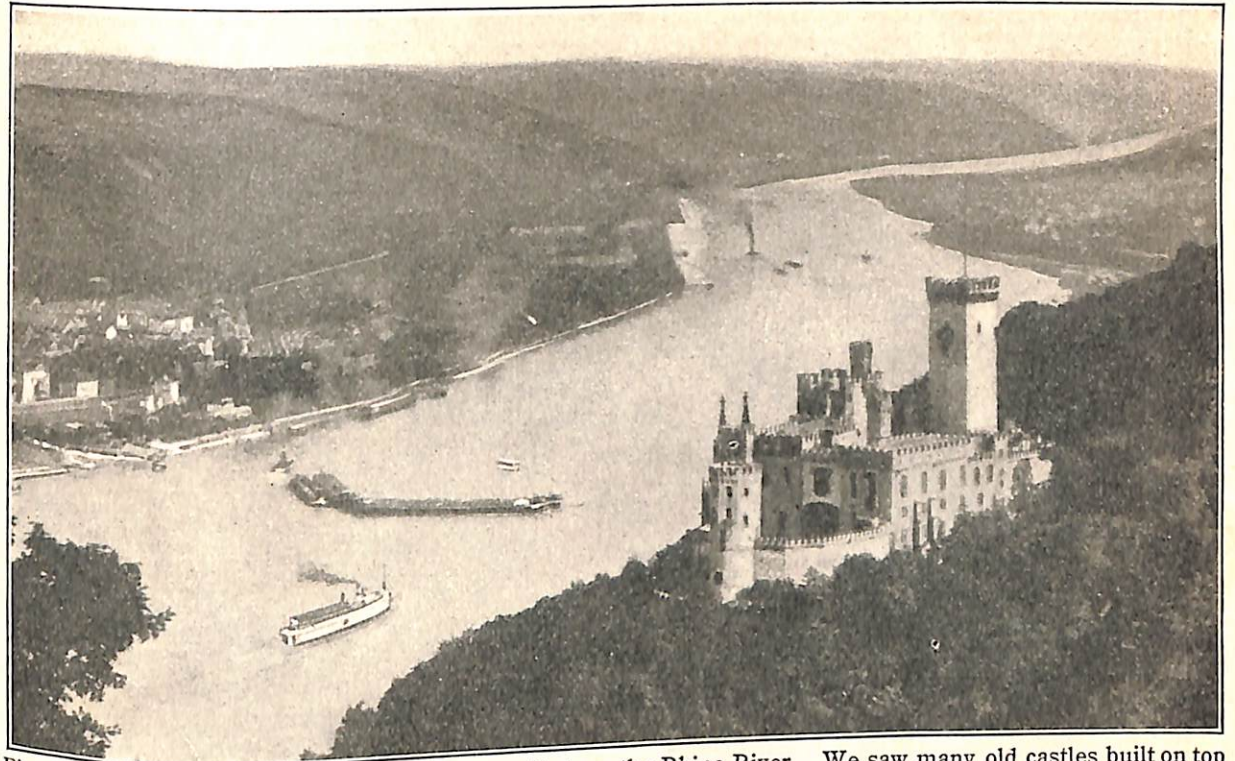


Fig. A. On our journey to Switzerland, we sailed up the Rhine River. We saw many old castles built on top of the high river banks. The castle in the picture is Burg Stolzenfels (Proud Rock Castle).

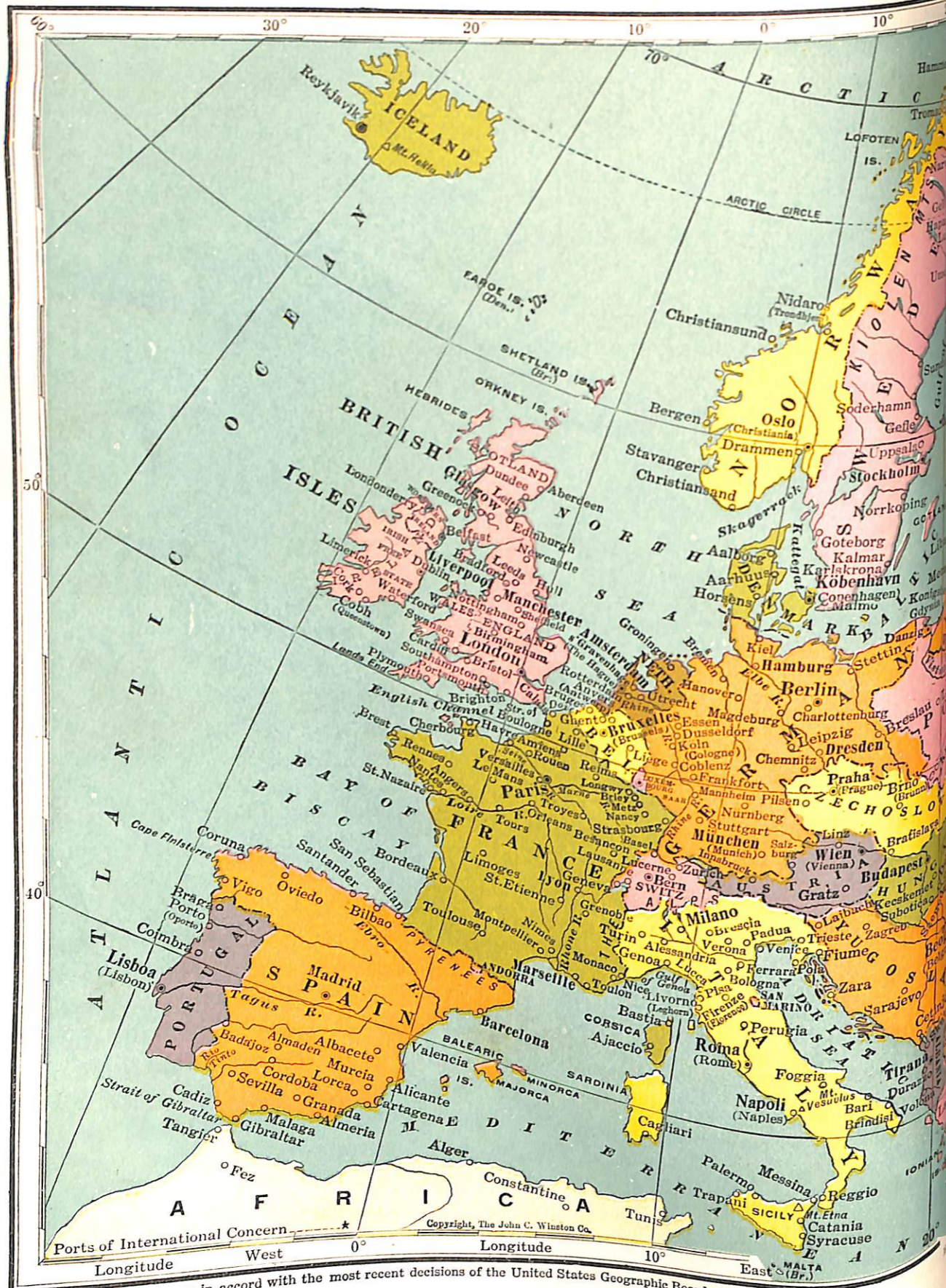
make us think of the Amazon. We never pass a big forest. There was once a forest here, but it was cut down, and the land was made into fields and little farms. We see villages. We pass cities where there are many factories with tall smokestacks. We see railroad trains with locomotives puffing and whistling along the shore of the river. Everywhere we see signs of many people, many cities, towns, villages, and little farms. We are in Europe. Europe is more like our own country than any place we have visited. The chief difference between Europe and our country is that there are so many people in Europe that they have to use their land very carefully in order to grow enough crops for all the people. In the United States we

have so much land that we do not yet take good care of all of it.

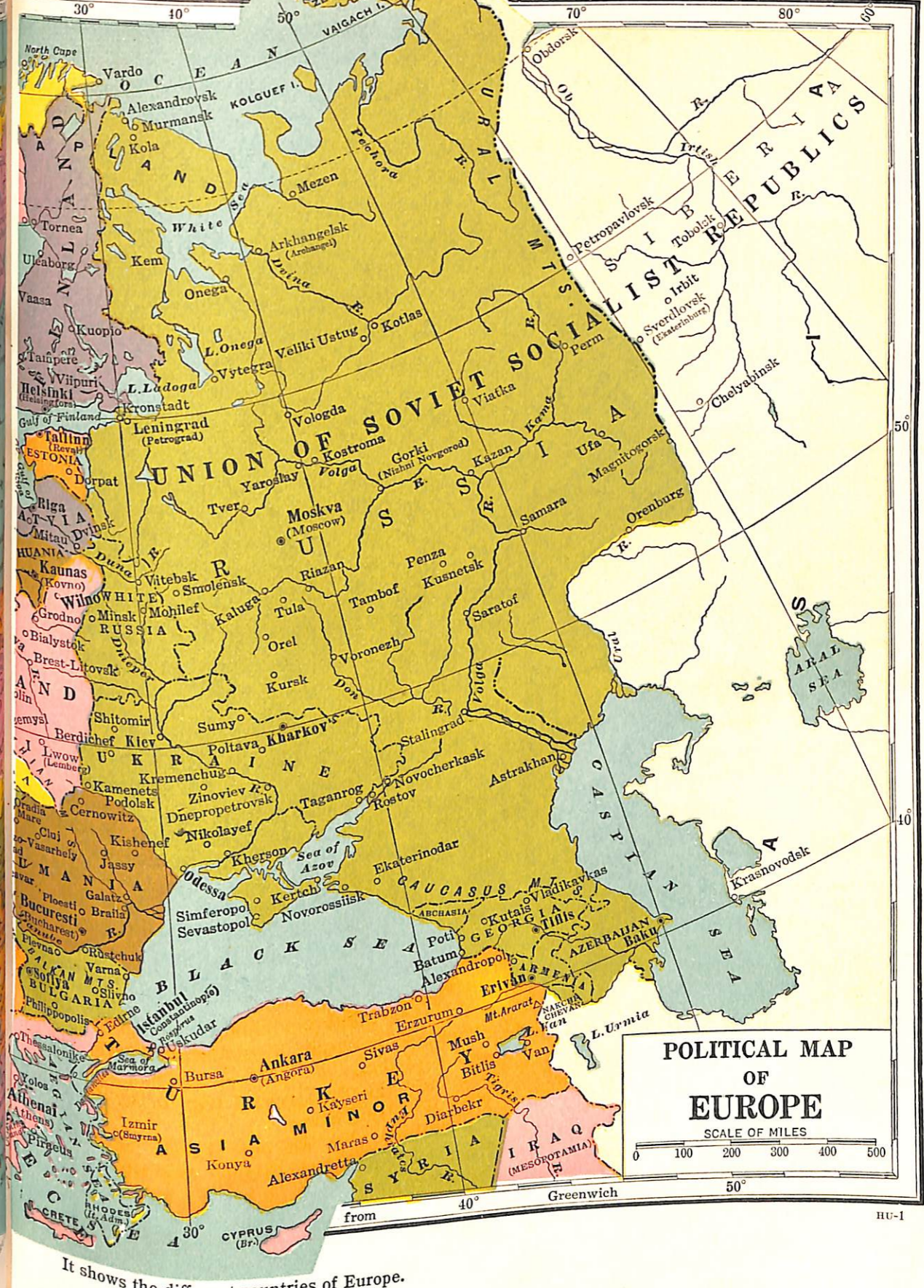
As we go up the Rhine, we pass many interesting things; but we shall read about that in another geography year after next. At last the mountains come close to the river, and we stop at a city called Basel. Basel is on the edge of Switzerland. Switzerland is an interesting and beautiful country. Thousands of Americans go to Switzerland every year because it is such a nice country in which to travel and enjoy a vacation.

If you look at the map of Switzerland (Fig. 106-A), you will see that it has mountains in the north and many wide mountains in the south. The land between these mountains is lower than the mountains, but it is higher than the Amazon Valley.

109-1



Spellings of place names are in accord with the most recent decisions of the United States Geographic Board.



It shows the different countries of Europe.

Fig. A. This map is a political map.

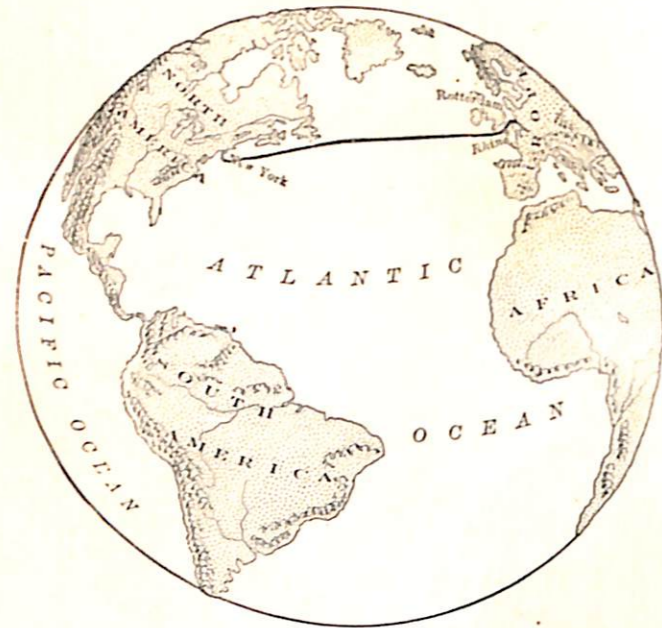


Fig. A. On this globe our steamer route from New York City to Rotterdam has been drawn.

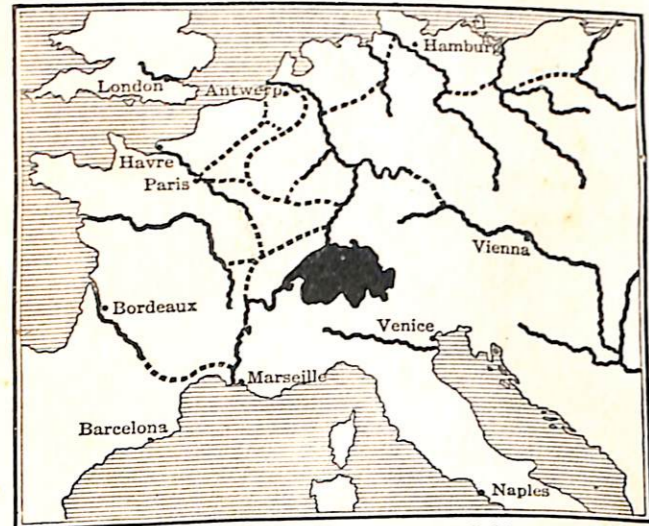


Fig. B. This map shows a part of Europe. The black area shows the position of Switzerland in Europe. Run your finger up the Rhine River to Switzerland. What are the dash lines?

It is called a plateau. Most high plains are called plateaus. This plateau of Switzerland has many lakes on it. One large lake at the southwest is called Lake Geneva, and another large lake at the northeast is called Lake Constance. If you look closely at the map, you will see that two rivers come out of

the high mountains of Switzerland and flow into these lakes. The one that flows into Lake Constance is the Rhine. It goes on down to the North Sea. The other that flows into Lake Geneva goes down to the Mediterranean Sea. Can you find its name on the map (Fig. 110-A)?

The map (Fig. 110-A) shows you that Switzerland seems to be a country from which rivers run in all directions. We have seen the two rivers run off in two directions. If we look closely, we see that the branches of the Danube run off to the east and the branches of the Po run away to the south. These four rivers show us that the mountains in and near Switzerland divide the water so that it runs away in many directions. Switzerland is the top of western Europe. The most interesting thing about it is its high mountains, the Alps.

THINGS TO DO OR TO THINK ABOUT

1. Make a floor map of Switzerland. Then show the land around it as far north as the North Sea and as far south as the Mediterranean Sea. Show the location of the four rivers, the two cities, the two lakes, and the two seas that we have just read about. Add all the new names of places to your location lists. But first be absolutely sure that you can really locate all these places.
2. Make sand-pan models to show the difference between a mountain, a plain, and a plateau.
3. Add the Switzerland trip to the *Trips That We Are Taking*.
4. Where else on our travels have we found a land that divides the waters of two or more rivers? What did we call it on account of this? What then might we call Switzerland?



Fig. A. The body of water is Lake Geneva in Switzerland. The snow-clad mountains are the Alps. The steep hillsides have been terraced and planted in vineyards.

THE HIGH MOUNTAINS

Before reading this section try to find how high your schoolhouse is. Perhaps your teacher will help you to find how many such buildings, one on top of another, would be a thousand feet high.

Travelers who have crossed the United States on the Lincoln Highway or some other highway, tell us that the weather is much cooler in the mountains than on the plains. It is always that way in the mountains. The higher up we go, the cooler it gets. There are two ways to get to cool places. One is to go to the Far North, or to the Far South; the other is to go up a mountain or up in an airplane.

One of the travelers who came with us on our boat from America wants to climb a high mountain. He wants to go to the very top or peak. Let us go with him as far as we can. As we stand here on the central plateau of Switzerland looking toward the south, we see tall mountains. The tops of the mountains are covered with snow, winter and summer.

We get into an automobile and go south across the plateau toward the shining white mountains. The plateau is a land of farms, all well kept and very neat. Every bit of good land is made into fields with



Fig. A. This picture shows a section of the famous St. Gothard Pass in Switzerland. The road winds round and round as it climbs the mountain, in order to avoid steep grades.

orchards of apple trees and plum trees and walnut trees along the road. Here and there on a hillside that slopes toward the south, we see many grapevines.

As we go up the good road and reach a height, or altitude, of two thousand feet above the level of the sea, we leave the grapevines; but we keep on passing the hay fields, the wheat fields, and the oak trees until we come to three thousand feet above the sea. At three thousand feet we

leave the oak trees. Our road now enters a valley, for we are getting into the Alps. We see high, rocky hills on each side of the valley. Nearer to us are little fields and small villages of a few stone houses. As we climb up and up the valley, we meet a stream coming swiftly down the mountain. It flashes white in waterfalls as it jumps over the rocks on its way down to the lakes on the plateau.

Between three thousand and five

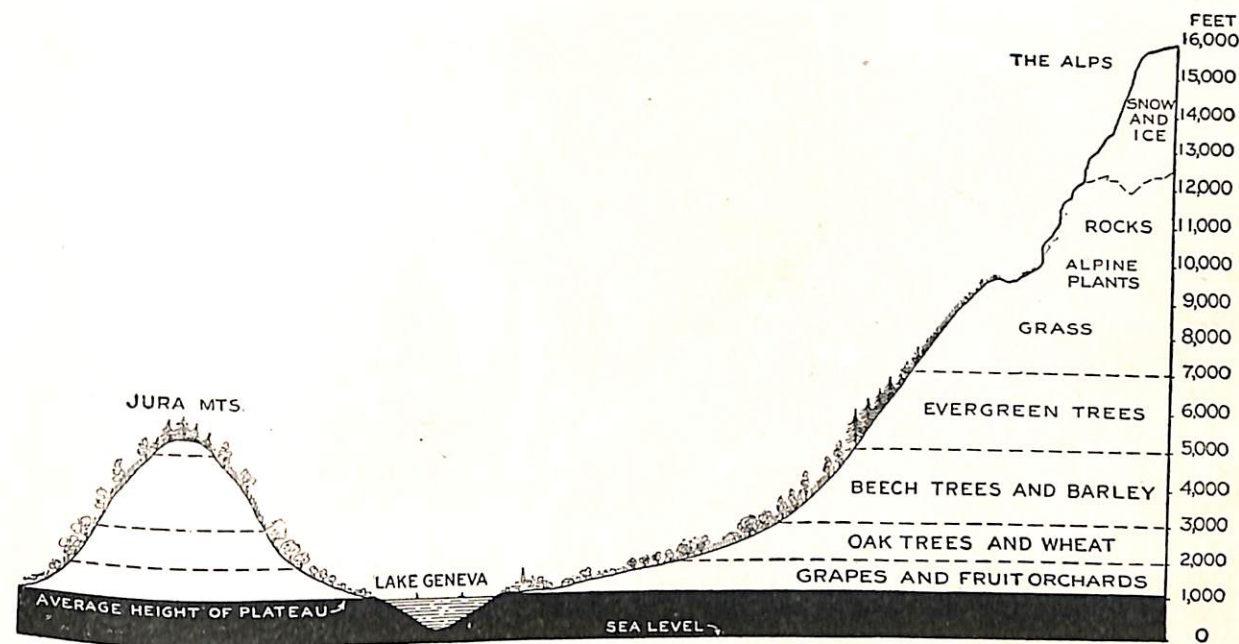


Fig. A. After you have read pages 114 and 115, tell about this picture.

thousand feet above sea level the fields have barley in place of wheat, and the trees are the white-barked beeches instead of the oak. At five thousand feet the barley fields stop and the beech trees stop. Instead, we see evergreen trees, pines, and firs. On up we go along the good road that the Swiss have worked so hard to make. In and out the road bends, and back and forth it goes so that it may not be too steep. We look up at the forest of evergreens, and we see a long strip where there are no trees, only bare earth and stones. A great pile of earth and stones lies at the foot of a hill. It tells us that here was a landslide. In the spring of the year, during heavy rains, a large amount of rocks and dirt slipped loose from the mountain side, and crashed down through the forest, sweeping everything in front of it and leaving a bare place behind it.

At seven thousand feet we pass the last evergreens. We have come to what is called the tree line. Above this it is too cold and windy for trees. The last trees we see look as though someone had been sitting on them nearly all their lives, and indeed that is the case. The little trees that look as though someone had sat upon them have spent their winters under heavy snow, and in the summer the wind has blown so hard that they could not hold their tops up. Trees that try to grow in such places have to bend to the wind and so grow crooked. A tree may be no higher than your knee, but as old as the big trees down on the plateau or as old as the trees along the streets and yards near your home.

Our automobile goes on up for half an hour. We are beyond trees, but not beyond plants. Indeed, this

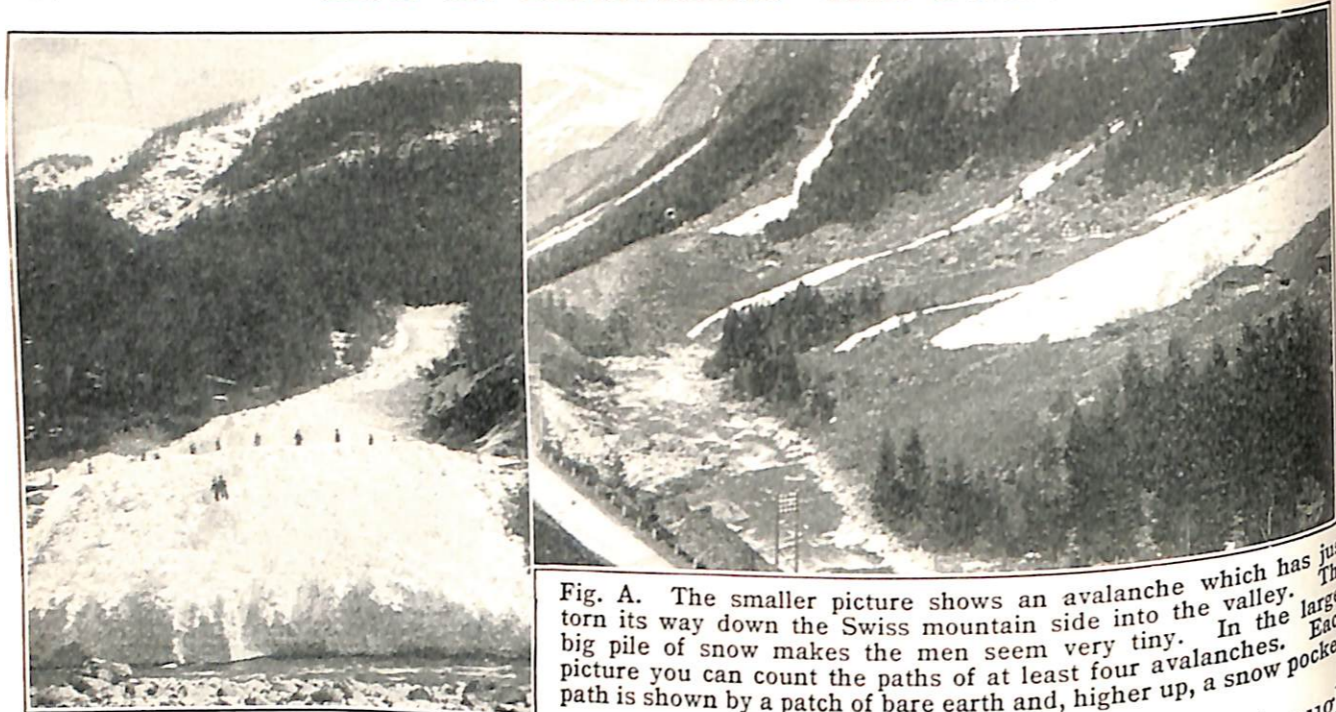


Fig. A. The smaller picture shows an avalanche which has just torn its way down the Swiss mountain side into the valley. The big pile of snow makes the men seem very tiny. In the larger picture you can count the paths of at least four avalanches. Each path is shown by a patch of bare earth and, higher up, a snow pocket.

is a very beautiful place, because the Alps, like most other high mountains, have many beautiful flowers that bloom above the tree line. This place is much like the tundra. You remember that when we went to Eskimo Land we went so far north that we got beyond the tree line and found the tundra full of flowers. Here on the mountains in Switzerland we are above the tree line, and we find that this place, too, is full of flowers. One of these, a red plant, is called the *Alpine rose*. The Swiss think it is a sign of youth and life. Another plant called *edelweiss* grows only in the rockiest places. It is a silvery white.

Suddenly the road, which has been going up, up, up for miles and miles, now goes down in front of us. We have come to the top, but we see many higher mountains to the right and to the left. The low place between these high mountains is

called a pass. The road goes through the pass and down the other side of the mountain.

When we reach the pass, our mountain climber with his two companions leaves the automobile. The two men are Swiss guides. It is their business to help mountain climbers from foreign countries to climb the high peaks. We go with them a little way, for we see some snow, and we want to know what snow is like in July. When we get to it, we find a big drift of dirty, whitish snow. Beyond it and above it there are some bare rocks and then more snow, and up as far as we can see are snow and rocks.

Why is snow here in summer? The winter storms bring snow and more and more snow. It is piled so high that it cannot all melt during the short summer of the high, cool mountain. Each year adds to the pile of snow. Sometimes it gets to

be forty or fifty feet deep on the mountain and slowly works its way down the steep slopes.

You remember that when we went to Eskimo Land we read about the glaciers in Greenland. Switzerland also has glaciers, but they are not nearly so large as those of Greenland. Switzerland has one glacier that is twelve miles long. The snow on the high mountains slowly works its way down the steep slopes into the little valleys. Sometimes a valley that is much deeper than a house will be full of snow. The snow melts a little by day and freezes by night, and finally turns to solid ice. It fills the little valley full of ice, with a crust of snow on the top. This is a glacier. We may call this valley full of ice a valley with a stream of ice in the bottom of it. Slowly this stream of ice flows down the valley, a few inches or a few feet or a few yards each day. If the stream of ice comes to rough stones or boulders that lie in the bottom of the valley, it may crack open at the top in trying to get over the stones. Such a crack is a dangerous place. You may fall into a crack and be killed. People are killed on the Swiss glaciers nearly every year.

Rocks and dirt fall down from the steep mountain sides, rest on top of the glaciers, and ride down the valleys with them. Sometimes two glaciers come together as two streams do. Then the streams of rocks and dirt that were along the edges of the two glaciers come to the middle



Fig. A. After you have read page 115, tell what has happened to this tree.

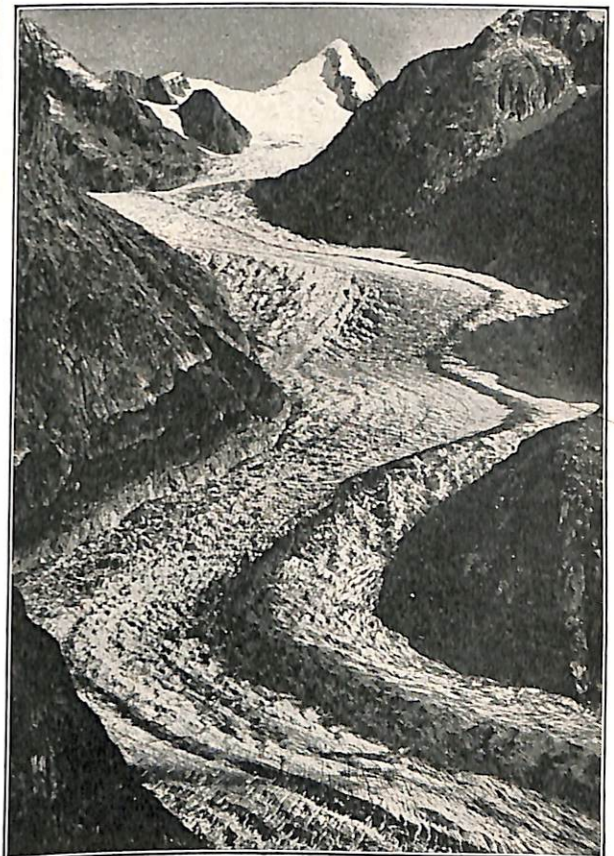


Fig. B. A glacier in a Swiss mountain valley. The glacier is fed from the snow field at the top of the picture. Trace with your finger the central moraine.

of the glacier. This string of rocks is called a *central moraine*. As the glacier pushes along down the valley, it freezes around rocks, clasps them



Fig. A. Your teacher will show you how to find the Rhone River on Figure 106-A. In the picture you see the stream which pours from the end of the Rhone glacier in Switzerland. This stream is the beginning of the Rhone River. Find the Rhone River on Figure 110-A also.



Fig. B. The guide is standing on the Aletsch glacier in Switzerland. See the big crack in the ice. How did the boulder get on top of the glacier?

tight in its icy mass, and then pushes them forward, just as you might take a sharp stone in your hand and push it around on a table. You would scratch the table in doing this; and in the same way the glacier pushing the stones scratches the valley and digs into the earth. For that reason, valleys that have had glaciers in them often are wide and round, because the glacier has shaped them that way. They are not sharp and narrow like the mountain valleys which are made by streams of water. Finally, as the glacier goes down-stream, it gets to lower and lower valleys where the heat of summer is greater. At last it comes to a place

110-1

where the ice melts as fast as the glacier brings it down. This is the end of the glacier, and here the glacier dumps off the rocks and dirt almost as a truck would dump them. Often it builds up great piles of them. This pile of stones that the glacier brings down is called the end moraine or *terminal moraine*. The Swiss valleys have many terminal moraines, and they are also to be found in many other parts of the world. Often the terminal moraine makes a dam across the valley. Water stands behind this dam and makes a lake. In that way most of the Swiss lakes were made.

While we have been looking down into the valleys at the glaciers, the American who wants to climb the mountain has gone up over the snow with his two guides. Each of the men carries a stout cane called an *alpenstock*. It has a sharp piece of iron on one end. He sticks this into the ground. On the other end of the *alpenstock* he has a little ax and a little hoe. He uses the hoe to dig out steps in the mountain side and the ax to cut steps in the ice. To climb a high mountain made of bare rock and covered in places with snow and ice is a very hard thing to do. When they get to the worst places, the two guides tie a rope from their belts to the belt of the climber, so that if one of them should slip, the other two may hold him.

It is a great thrill to climb a high, snow-clad mountain. People

go to Switzerland from the United States and many other countries just to climb these mountains. There are many men in Switzerland whose business it is to help the travelers make these dangerous trips. On many of the mountains there are little huts far up on the mountain side. Here the climbers sleep on the way up. Then they sometimes get up before daylight and start on the last part of the journey. Sometimes the snow is deep and the climbers must get over it and reach the top before the snow gets soft. If it does, it makes the walking very hard indeed. Sometimes, if the snow is soft, it slides down with the climbers. Many have died this way.

THINGS TO DO OR TO THINK ABOUT

1. Add the Alps Mountains to the floor map. To what else shall we add the name Alps Mountains?
2. Make some drawings that will help to explain these things:
 - (a) The central and the terminal moraines of glaciers.
 - (b) How a mountain pass looks and how it helps travelers.
 - (c) How the side of a mountain looks with its different kinds of plants at different altitudes. What does the word *altitude* mean?
3. Make a sand-pan model of a dam. Show also how a dam made by a terminal moraine can cause a lake.
4. What kinds of trees do we find along the roads in our neighborhood? What kinds of trees do the Swiss people plant along their roads? Why do you suppose they do that? Which is better, their way or our way? Why do you think so?
5. Try to find pictures of an Alpine rose and of an edelweiss.

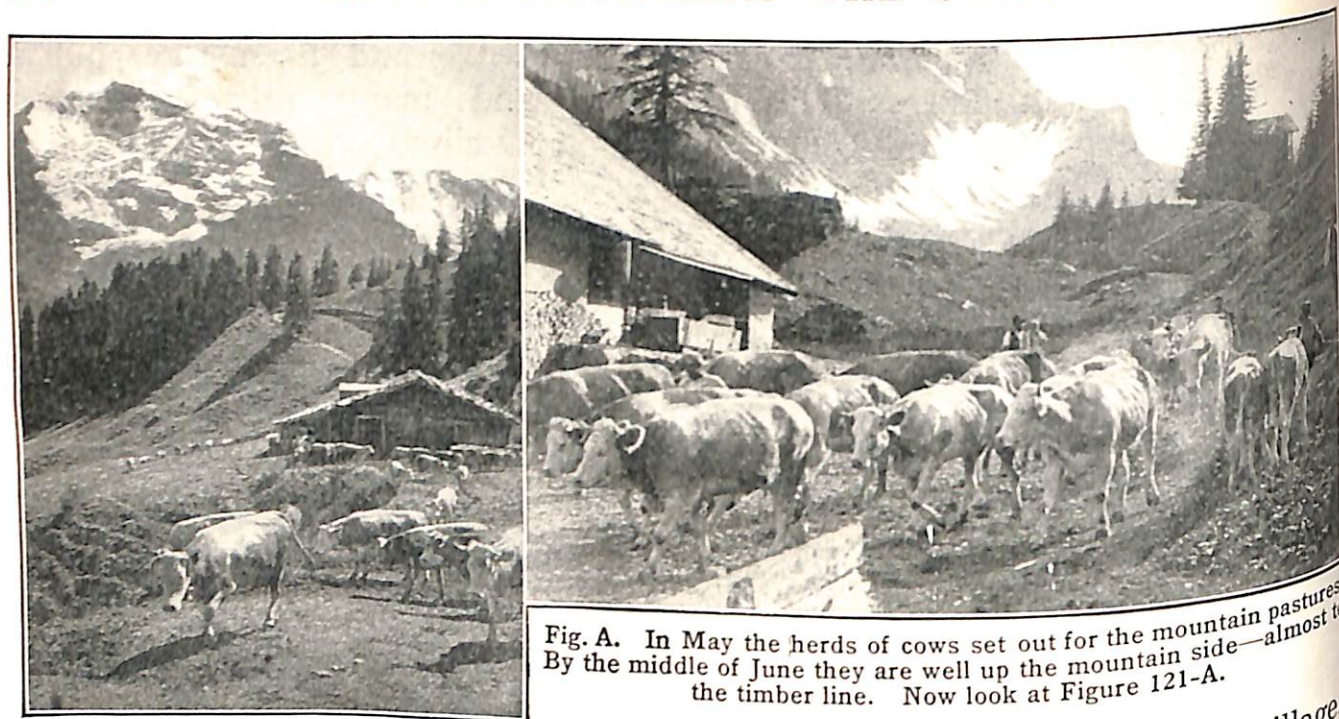


Fig. A. In May the herds of cows set out for the mountain pastures. By the middle of June they are well up the mountain side—almost to the timber line. Now look at Figure 121-A.

THE SWISS MOUNTAIN FARMER

Adolph Schneider is a farmer. He lives in a village in a little valley at the foot of the high Alps. When spring comes, he is very busy plowing his ground and planting his garden and his field of potatoes. He must get these jobs done before it is time to take the cows to the mountain pasture for the summer. This happens every year in May, when the snow has melted from the lower slopes of the mountain above the village.

The farmers of this valley do not have land enough near the village for the wheat field, the potato field, the garden, the orchard, the hay field, and also for pasture. The cows spend the summer on the mountain pastures where the land is too steep to be farmed. Everyone is greatly excited on the day the cows set out for the pasture. There are a hun-

dred cows to go from this village. Five men of the village go with them to take care of them. Every one in the village goes the first mile with the herdsmen and the leading cow of every man's herd has a bigger bell. The bells tinkle, and the people sing songs and play music as they go along with the herdsmen. This is a stanza from one of their songs:

"No life like the herdsman's, so lusty
and fair,
Breathing and joying the sweet moun-
tain air:
With the sun in the morning he rises
and swells
With joy as he hears the gentle cow
bells."

Adolph Schneider has only four cows of his own, but he will take care of twenty cows because he has the herds of three of his neighbors. In return for his care of their cows,

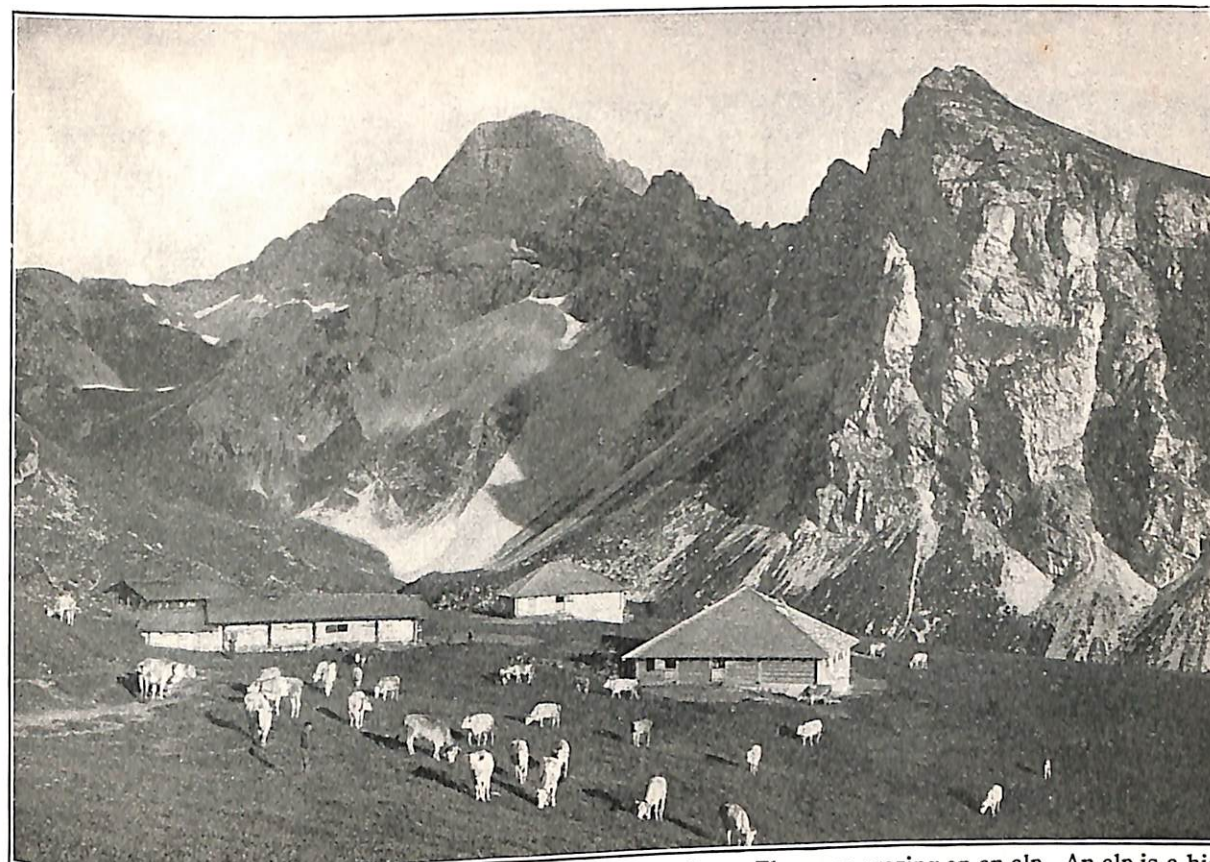


Fig. A. It is midsummer. The cattle are above the timber line. They are grazing on an alp. An alp is a high mountain pasture in Switzerland.

they will help with the work on his place while he is absent.

For the first two or three weeks the herd is only about a mile or two from the village, and some of the men come back every night; but by the middle of June the cows will have eaten all of the grass and must be taken farther up the mountain. By midsummer the snow has melted farther up, and there is fresh grass up there. All the men now live in a room at one end of a log shed, which is big enough to hold the cows at night. It is only a rude house. It has a rough table and rough benches. Sometimes the men sleep on hay spread on the benches.

For food they have chiefly milk and cheese, and bread which one of their neighbors brings each week from the village.

Soon they move on. They move again and yet again. The last move is made in July. This time they are above the timber line, and they live in a stone hut. Here the work is harder because the men must carry wood up from the forests below. Wood is needed to heat the milk in the great caldrons where they make cheese. Every day each man milks his sixteen cows and makes the milk into cheese. Cheese can be kept for winter and sold in the city markets.

In August the nights are getting



Fig. A. An air view of a Swiss lake in the Alps Mountains during the wintertime. The lake is in a narrow valley which a glacier has dammed by pushing dirt into it.

shorter and colder and the cows have eaten all the grass on the upper pasture. The herders now bring them back to the lower pastures, where they eat what is called the aftergrass. Finally, in October, they get back to the village. Soon the snow comes. The cattle must now be fed in the barns until spring. There are stacks of hay waiting for them. This summer trip of the herdsmen to the mountains is called a *seasonal migration*.

While Adolph Schneider was on the hills taking care of his own cows and those of the neighbors, his wife and Kurt, his fourteen-year-old boy, and Kurt's little brother and sister all worked early and late pulling weeds, hoeing, plowing, and helping

to harvest the hay. The neighbors whose cows Adolph keeps also help with the hay. Maria, Kurt's seventeen-year-old sister, went away for most of the summer to work in a hotel where many Americans came to stay a few days as a part of their European trip.

As soon as Mr. Schneider came back from the mountains, he spent two busy weeks digging potatoes, planting the wheat, and picking the apples. Mrs. Schneider dried some of the apples over the kitchen stove to make them keep until next winter and spring.

By November the ground was covered with snow. Kurt and the younger children went to school. Now Mr. Schneider and his neigh-

bors went up into the forest far above the village. They cut down trees and dragged them through the snow to the village. When spring came, they all had neat piles of firewood piled up by their houses, to keep the fires running for another year.

While they were working in the timber, they had to be very careful where they went because of the danger of avalanches. The snow gets so deep on the steep sides of the Alps that it often slides down. It sometimes catches people and buries them alive. In some villages the people do not dare to go away from the village for weeks, many long weeks during the winter, because there is danger of avalanches at that time. The villages, of course, are built in places where avalanches never come.

After the year's wood supply was in, Mr. Schneider spent several hours each day carving wooden toys to send to America. This was something he could do in the house. By carving toys he could make a little piece of wood give him a job for several hours. The Swiss must do everything they can to make a living in a country where there are so many people that no one can have a large farm.

THINGS TO DO OR TO THINK ABOUT

1. Here is a new kind of interesting chart to make. At the top of a very large piece of cardboard print, *How the People of Switzerland and the Rest of the World Help One Another*. Then draw a vertical line from the title to the lower

edge of the cardboard. This will give you two columns. At the top of the first column, print, *What Other People Send to Switzerland*. At the top of the second column, print, *What the Swiss People Send to Other Lands*. Try to find a sample of everything that ought to go on this chart. Paste each sample neatly in the correct column. Be sure to label each sample. If there happens to be something for which you can't find a sample, make a drawing of it instead, and label the drawing.

2. Would you say that the Swiss people are nomads or not? Why?

3. Why do you think the Swiss farmers eat more cheese and less meat than farmers do in the United States?

4. Switzerland is a long way from Greenland. Why are there glaciers in both places? Which has the larger glaciers? Why is this so?

5. Tell something about avalanches.

6. Pretend that you are far, far up in an airplane, and have very, very strong field glasses. With them you can see the ground all the way from the equator to the north pole. Make a drawing to show how the earth looks with its different kinds of plants at different distances away from the equator. Look at the sketch that you have just made and then look at the drawing you made the other day about the side of the mountain. How are the two drawings alike? How are they different? Why is this true?

7. Copy the sentences and fill in the blanks:

Suppose we start at the equator and travel toward the north. The farther away from the equator we go, the it gets. Now go back and start at the equator again and travel toward the south. The farther away from the equator we go, the it gets. Now we are going to climb a mountain. The higher we climb the it gets. Thus we can see that two general directions have something to do with how hot or how cold a place is:

- Distances away from the equator.
- Distances up from sea level.

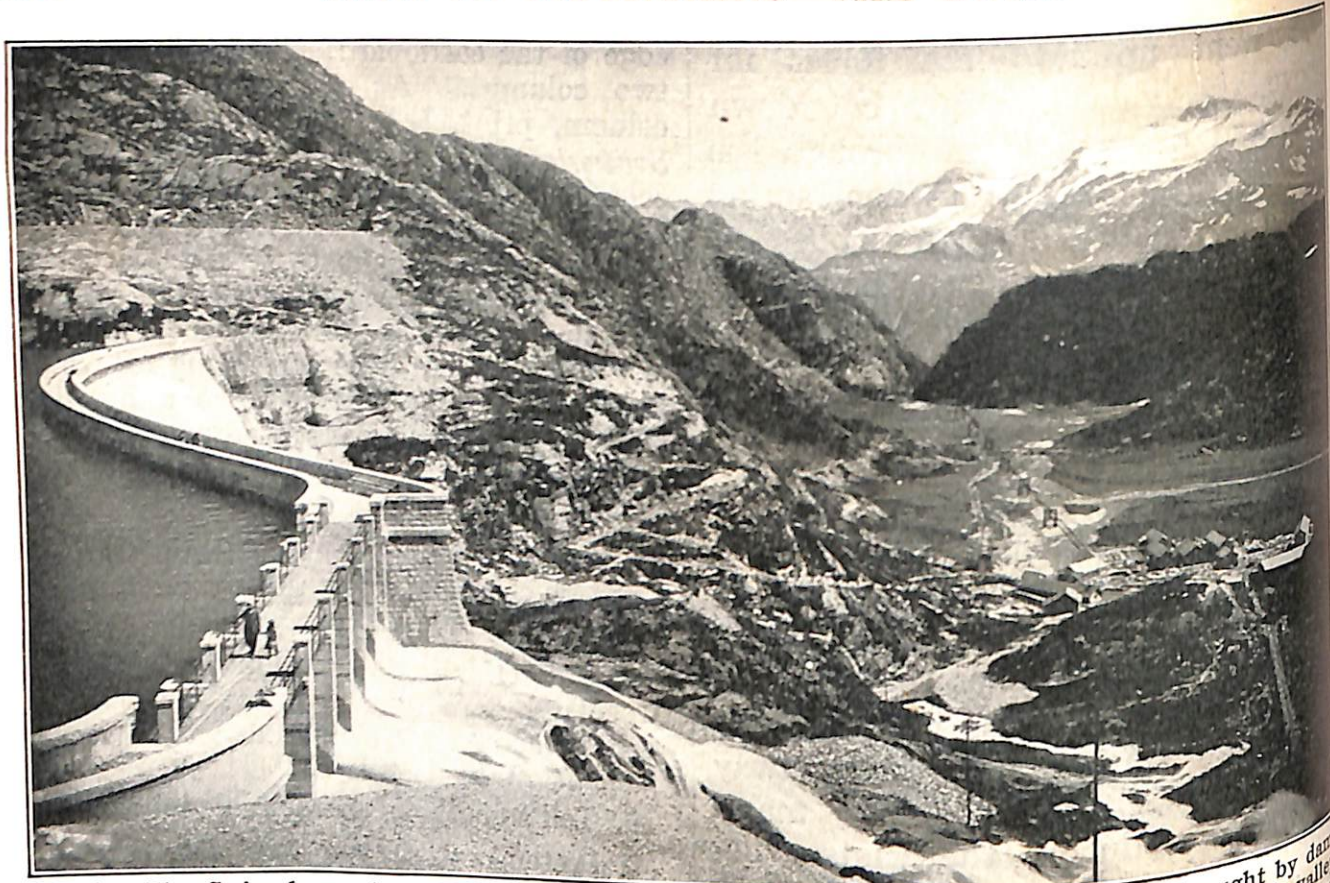


Fig. A. The Swiss have plenty of white coal. Water tumbling down the mountain sides is caught by dams like the one in the picture. Some of the water is led by pipes from the dam to the power house in the valley. The force of the falling water is used to make electricity. The electricity is carried to the cities over the power lines which you see in the picture.

CITIES, WATER POWER, AND TRADE

Mr. Schneider has two boys. What will they do when they grow up? Can he divide the farm into two farms and make a farm for each of the boys? No, the farm is too small. Only by hard work can it be made to provide enough for one family. One of the boys will have to get another job. What is there in Switzerland to give people work to do? Switzerland is a little country, and there is not room for any more farms or any more forests or any more cows. Therefore one of the boys must do factory work or other work in town. In town he will work

for wages and buy everything he uses, very much as people do in our country. What will he do in town?

Long ago the Swiss began to make watches. They made very good watches, and the Swiss government now has several schools where people can go to learn to make watches. It takes skill to make a watch. The Swiss make watches by the thousands; they send nineteen watches out of Switzerland for every one that they need to keep at home.

Some time ago I saw a wonderful instrument for explorers to use. The explorer has one or two perfect watches and this instrument, he can

take it out at night in a strange place, look at the stars, and tell almost exactly where he is. This is a great help to an explorer. This instrument was made in Switzerland. It is called an *instrument of precision*. There are many instruments of precision needed in factories, colleges, and physicians' offices. The Swiss make many kinds of fine machinery and sell half of it to other countries. They have to buy all the iron and steel and tin and copper, but they can sometimes make a hundred dollars' worth of instruments from raw material that cost only a dollar.

They buy cotton and make cloth and embroidery. They sell fifteen times as much embroidery as they keep at home. They buy silk and make ribbon, and sell eight times as much ribbon as they keep. Some of their milk is condensed and sold in tin cans to neighboring countries, and they sell six times as much of this as they keep at home. They also sell milk chocolate, buying their chocolate and getting the milk from their own cows.

Every year we buy thousands of fine watches from the Swiss; also fine machinery, ribbons, and much Swiss cheese and chocolate. We send them grain for their bread, also some for the cows to eat. We sell them cotton and petroleum and automobiles.

The Swiss have no coal to run their factories, but that does not bother them. The streams tumbling

down from the mountains have much power. The Swiss have water wheels that make electricity. The electricity runs their street cars and their factories and lights their houses. There are some country districts in Switzerland where every house has electric lights. A Swiss family uses more electricity than a family in any other country in the world. The houses in the Swiss cities are nearly all made of stone because there is plenty of stone in Switzerland.

THINGS TO DO OR TO THINK ABOUT

1. Do you think the Swiss are a skilful people? How would you prove it?
2. Tell about some Swiss schools.
3. What do we call the lines on the map and the globe that tell us how far from the equator a place is? Draw such a line on the floor map to show how far from the equator Switzerland is. Find a lake in the United States that is as far from the equator as Switzerland is. How do you know that your answer is right? Which is nearer the equator, Switzerland or the state you live in?

4. Here is a new kind of drawing to make. With the yardstick, draw a long line a few inches from the bottom of the blackboard. We'll call this the base line. Now near the left-hand end of the board, draw a vertical line one inch long up from the base line. Leave a space and draw another line up from the base line; this time, nineteen inches long. These two lines are supposed to show how many watches Switzerland sells to other countries for every one that the Swiss people make to keep for themselves. How could you label these two lines to make them show this? Draw lines from the same base line to tell the story about Swiss embroidery and Swiss condensed milk. Be sure to label each line. What title could we give to the whole drawing? Drawings like this are called *graphs*.

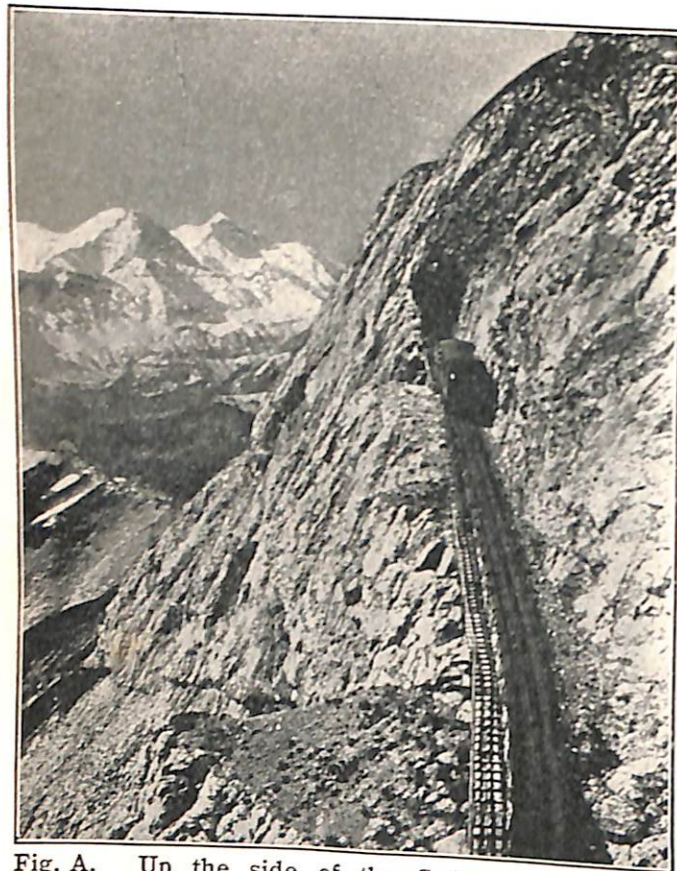


Fig. A. Up the side of the Swiss mountain and through the tunnel our cogwheel railroad car climbs.

SUMMER TRAVEL AND WINTER SPORTS

We have been traveling all day. We are tired. We reach a Swiss hotel. The manager sees us coming and walks to the door to meet us. He looks at us and speaks to us in good English. If we had been French, he would have spoken to us in French; if we had been German, he would have spoken to us in German; if we had been Italian, he would have spoken to us in Italian. A boy carries our baggage upstairs to the bedroom. It is sweet and clean and comfortable. We feel at home. We eat a good dinner and feel much better. During the night we wake up and notice a little

sound. It is the quiet, sleepy sound made by falling water, as a little stream tumbles down some valley at the edge of the village. In the early morning we hear the tinkling sound of cowbells from the pastures on the hills. We look out of the window. The hotel garden is green with grass, and it has beautiful flowers, well-kept shrubs, and neat walks. On the hill back of the town we see pine trees, and far away the pink of morning sunshine on the perpetual snow of an Alpine peak.

We have a nice breakfast and go out for a walk. The streets are clean, the houses are neat and well-painted. The shops are pretty. They have lace, wood carvings, jewelry, musical instruments, toys, chocolate, and many other things we want to buy. The people are polite. A little path leads off into the woods. We go along it and smell the clean odor of pine trees. We admire the flowers. We pass the gardens and orchards and terraced fields of the well-kept farms in this little valley. We say that this is a nice place to travel. It is warm enough to be pleasant and cool enough to make us feel like walking. If we are young and strong, we can climb the hills and mountains, climb as far as we like. Perhaps we can hire guides and climb to the top of a snow peak. This will take two days. We must sleep by night in huts that have been built for climbers far above the tree line. It is a great thrill to

climb for hours over snow and rocks and dangerous ice and stand finally with nothing above us but the sky, with snow-capped mountains and glaciers around us, and the valleys with their towns and cities far, far below.

If we want a hiking trip, Switzerland can please us. The country is full of pleasant little paths. You can put your pack on your back and walk from inn to inn. If you do not want to climb or hike, you can go to the top of the mountains by cogwheel railway, and thus get the fine view. Or you can stay at your hotel and take short walks, rest, and listen to music.

You can travel over all the country in automobiles and busses, or the railroad will sell you a special ticket. It is good on every railroad in Switzerland for two weeks. You can ride all day long and go wherever you wish, and it does not cost much.

Perhaps you now see why it is that every year thousands of people from the United States, from Canada, and from many other countries go to Switzerland for a rest and a change and to get something new to think about when they are home again.

The Swiss winter is cold, yet warm. The air is cold, as the thermometer, the snow, and the ice will show, but it seems warm. This is because in the valleys behind the high mountains there is no wind, and you can, therefore, feel the

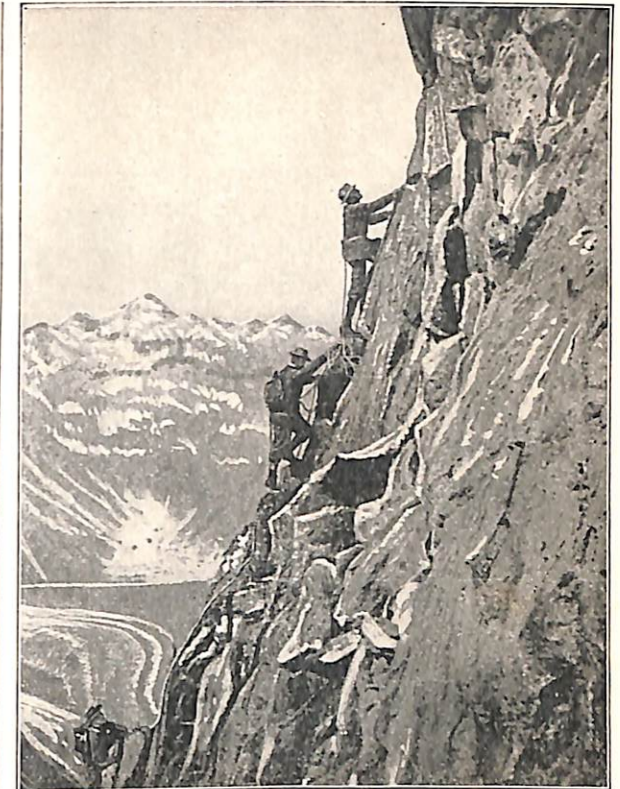


Fig. A. The men are climbing an Alpine peak in Switzerland. See Figure 107-A.

warmth of the sunshine. In this place where the weather is both cold and warm, there is a sanitarium for sick boys. The boys go out in the snow and sunshine wearing only a breech cloth as though they were in Africa. They are comfortable, and the sun bath helps to make them well.

Hundreds and thousands of people from England, Germany, and the United States go to Switzerland in the winter for snow and ice sports. The lakes and ponds are swept every night and sprinkled with water; so there is always a good surface. Some go to Switzerland to play ice hockey or even to take part in the international hockey games. Others



Fig. A. These men are playing the game of curling on an open rink in Switzerland.

like to do figure skating. Some waltz on skates to music. Professional teachers are there to teach you how to do these things. There are many contests, and the person who wins the golden skate has the greatest honor that can come to skaters.

The older men will often be on another part of the lake playing a game called *curling*, which is very popular in Scotland also. They use a stiff broom to push a polished stone across the ice. It goes spinning along. The point of the game is to make the stone stop at a certain place. The player whose stone stops closest to the mark wins. This is a very exciting game. There is a covered rink where match games of curling can go on even in a storm.

St. Moritz, in eastern Switzerland, is the most important center for snow sports. The town is spread out on the southern slope of the hill above a lake. The mountain keeps the wind away, and the sun shines warmly on the town and on the frozen lake. Mountains lie in front. Ice on the lake gets so thick that horse races are held there. It is even thick enough to hold a fence and grandstands and stables. Many thousands of people go out on the ice to watch the racing. The horses have special shoes so that they can stand up on the ice.

Coasting is another sport. Toboggans, bobsleds, one-person sleds, all kinds of sleds can be hired or bought. The courses are carefully arranged. There is one on which

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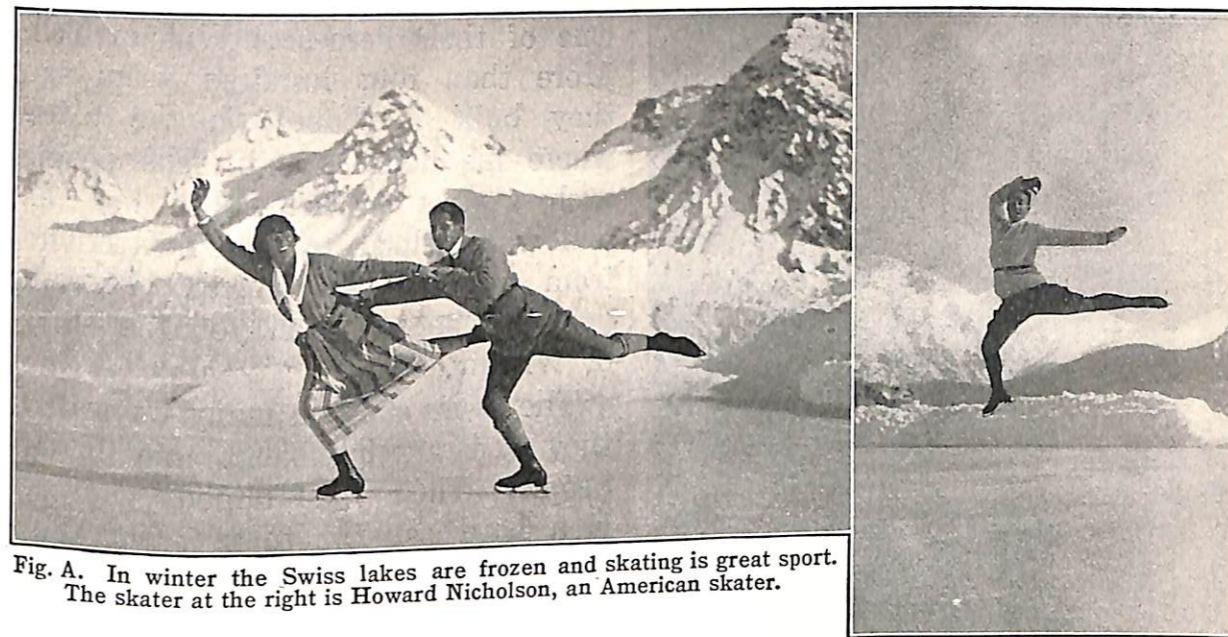


Fig. A. In winter the Swiss lakes are frozen and skating is great sport. The skater at the right is Howard Nicholson, an American skater.

you can start and go winding about and down for five miles. A train will take you back, and you can coast down again.

The winter sport that requires the most skill is skiing. The ski is a long, narrow wooden shoe. It is about two feet longer than the person who wears it. The first time you try to walk on skis, you do nothing but fall down. Teachers will show you how to use them. The beginners go out on what they call the nursery slope. The slope is gentle and not very long. You can fall down here and nothing worse will happen than getting snow down your neck. After weeks of practice you learn to slide down without falling. In the ski contests you sometimes go a mile a minute down long, steep hills. Sometimes you jump a hundred feet. It is a thrilling sport.

On the skis you can go over soft, deep snow where you could not

possibly walk in ordinary shoes. One can reach some parts of Switzerland in no other way in winter. The Swiss guides will not allow you to start on one of these trips until you have passed an examination. For more dangerous trips you must pass an even more difficult examination. In this way the guides make sure that you are able to meet the dangers of such a trip.

What do the Swiss do during all these winter sports? They haul snow to patch up the sled runs, they sweep the ice at night and spray it with water in the early morning. They teach skiing and lead parties across the snow fields. The Swiss are also busy taking care of the many visitors. They cook and clean, make beds, and serve tea. They have learned so well how to please that many people like to travel in Switzerland. The Swiss also win many of the winter sports contests.

HU-1



Fig. A. This statue of William Tell and his son stands at Altdorf, in central Switzerland.



Fig. B. The citizens of a Swiss canton, or state, voting in the public square of their capital, Glarus.

THE SWISS PEOPLE

The Swiss are an intelligent people, a hardy people, a courageous people. They are a people who love liberty.

One of their heroes is William Tell. More than four hundred years ago they built a chapel on the place where his house stood. The people wish always to remember him as one who helped to free Switzerland from some cruel rulers. Perhaps your teacher will tell you the story of William Tell.

The Swiss show in many ways that they are an intelligent and hardy people. Their mountainous country is a hard country to use, but they use it very well. If they plowed their hillsides carelessly, a few rains might wash their fields away, and they would have no fields. Therefore they plow the valley lands and make hay on the hillsides, so that the grass roots will hold earth on the hill. Sometimes they make the hillsides into terraces. See Figure 113-A. In other places they plant trees so that the roots will hold the earth on the hillside. In some places on the high pastures the soil is so shallow that the cows' feet would knock it loose. The Swiss have passed laws to keep the cows away from these places and let only the sheep and goats go there.

I have traveled back and forth in the Alps and I have scarcely ever seen a gully or a place where there had been a forest fire. Perhaps your teacher will get a report from the Bureau of Forestry at Washington about forest fires in the United States. The Swiss have forests scattered over their mountains so that they are near to every village. These forests are

cared for almost as carefully as we take care of parks and gardens in the United States. The little trees are planted in rows like rows of corn. When they are cut down, the wood is all carefully saved for firewood or building wood.

The Swiss are a courageous people. They have to be so. The herdsmen must follow the flocks to pasture, sometimes in places where a misstep might be death. Working in the forest, they risk death every minute. But when mountain climbers wish to climb mountains in Asia and Africa, nearly always there are Swiss guides there to help them do it.

The Swiss are a liberty-loving people. They love their country very much. Many times they have fought to keep it free from foreign rulers; but more important, they work for it every day. The Swiss government is a very good government. Some of the best and most intelligent people in Switzerland are the government officials, and they work for a very small salary. People who spend the government money, spend it honestly; so the government is very well run. For example, the government owns all the railroads, which it runs well and without waste. This is a very hard thing for a government to do. There are few rich people in Switzerland, and none are very poor. All the Swiss learn to work. They all go to school and are a well-educated nation. There are many schools in Switzerland where people learn how to become skilled workers.



Fig. A. This farmhouse in Switzerland has a thatched roof. The workmen are repairing the roof with straw.



Fig. B. A tunnel entrance on a double-track Swiss railroad. Is there a wagon road in this picture?

Now you see how the Swiss have managed to have a good nation without having any ports or any ships to carry their trade to foreign lands.

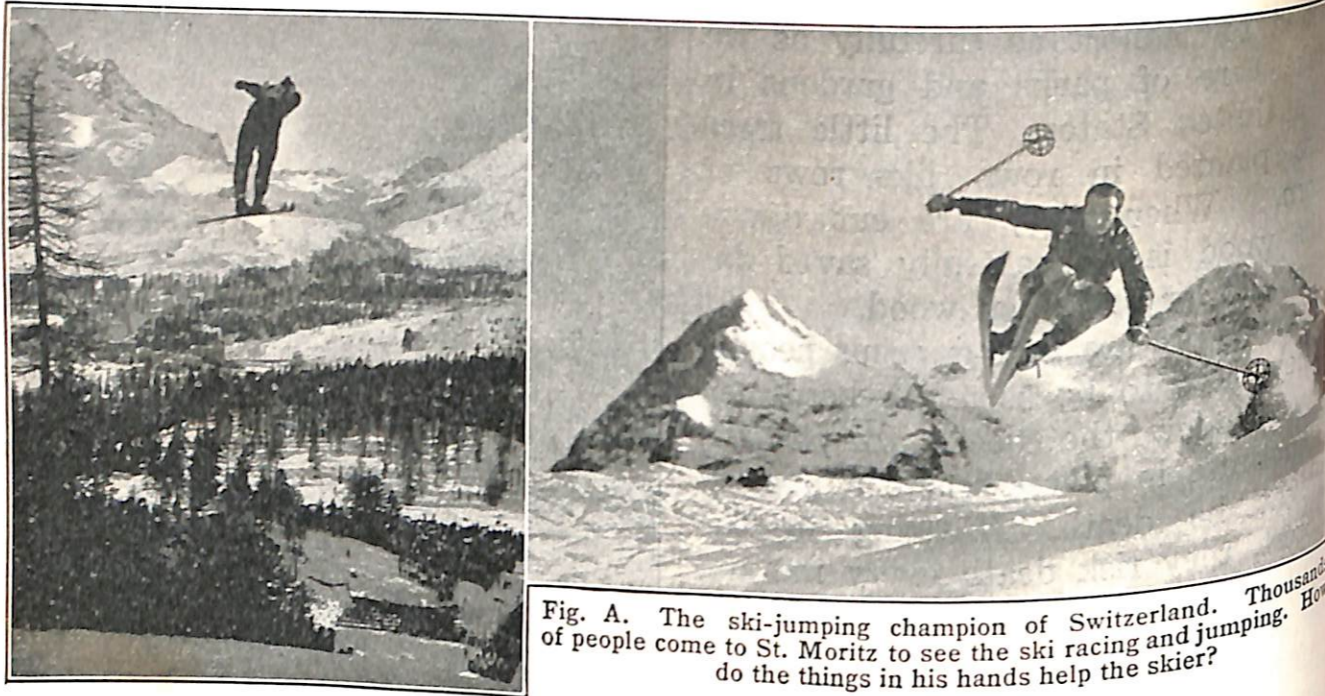


Fig. A. The ski-jumping champion of Switzerland. Thousands of people come to St. Moritz to see the ski racing and jumping. How do the things in his hands help the skier?

THINGS TO DO OR TO THINK ABOUT

1. Divide the class into eight groups. Then let each group choose one of these titles for a play:

- (a) The Mountains of Switzerland in the Summer.
- (b) The Valleys of Switzerland in the Summer.
- (c) The Mountains of Switzerland in the Autumn.
- (d) The Valleys of Switzerland in the Autumn.
- (e) The Mountains of Switzerland in the Winter.
- (f) The Valleys of Switzerland in the Winter.
- (g) The Mountains of Switzerland in the Spring.
- (h) The Valleys of Switzerland in the Spring.

After each group has finished giving its little play, the leader of the group may ask other children in the class to tell what people in our country or some of the friends we met in foreign lands would be doing at this time of year.

2. Look at the globe and try to guess how many times the United States is larger than Switzerland. How many languages do most people in the United States speak? How many languages do

many people in Switzerland speak? Why do they learn to speak them? What are some of the languages they speak there?

3. Add Zurich and Geneva to the floor map and to the *Locations* list.
4. Add this trip to the map of *Trips That We Are Taking*.
5. How do the Swiss people manage to do some trading with people in other lands? Would they do more or less of this trading if the ocean touched Switzerland? Why?
6. What makes you think you would very much like to meet some real Swiss people instead of just make-believe?
7. Tell us a few reasons why there are no large cities in Eskimo Land. Then tell us just why the cities of Switzerland are on the plateaus instead of in the mountains. Why does Switzerland have more of her people in cities than the other countries we have studied?
8. How do the Alps Mountains help the Swiss to be very wonderful people? How do they help these people to earn a living?
9. After you know the story of William Tell, make up a play about this hero. Perhaps your music teacher has a talking-machine record of a part of the opera, "William Tell." When you hear it, see if the music tells you anything about the life of the Swiss people.

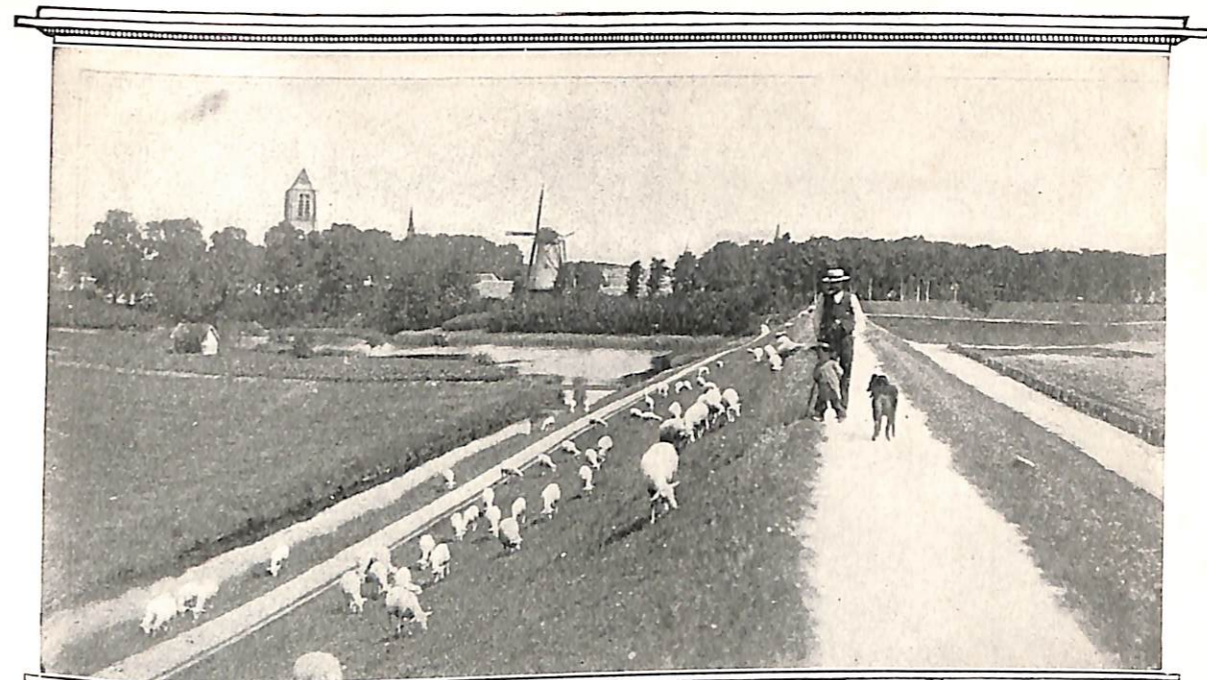


Fig. A. The man and boy are walking along the top of a dike. At the right side you see a little piece of sea beach. The wooden piles are driven into the sand to keep the waves from cutting the bank away. The sheep are grazing on the inner slope of the dike. The man is a shepherd, and the dog helps him drive the sheep. When the tide is in, the sea is higher than the land on the other side of the dike. You can see the difference in this picture. Scenes like this are very common in Holland.

HOLLAND, THE HOME OF THE DUTCH —A LOW, TEMPERATE REGION

THE FIGHT WITH THE WATER

Every day of your life you use many, many things that have been in Holland before they came here. You have traveled in different lands and have also used many, many things there that had once been in Holland. Now you are going to visit Holland, and you are going to discover why this is so.

You will be very much surprised to see so many people living in such a tiny country, but your trip will tell you why.

Nearly everyone in the United States speaks of the people of Holland as Dutch. Their country is the Netherlands, which means lowland. As you

read this chapter, see if you can find reasons for the name.

It is easy to get to Holland. When we were going to Switzerland, we sailed from New York to Rotterdam, a city in Holland. As we go up the river to Rotterdam, we see that the country on both sides of the river is as flat and level as a floor. There is never a hill to be seen anywhere. This land is part of a delta, the delta of the river Rhine. Most of Holland was made of Rhine River mud. Look at the map (Fig. 134-A)

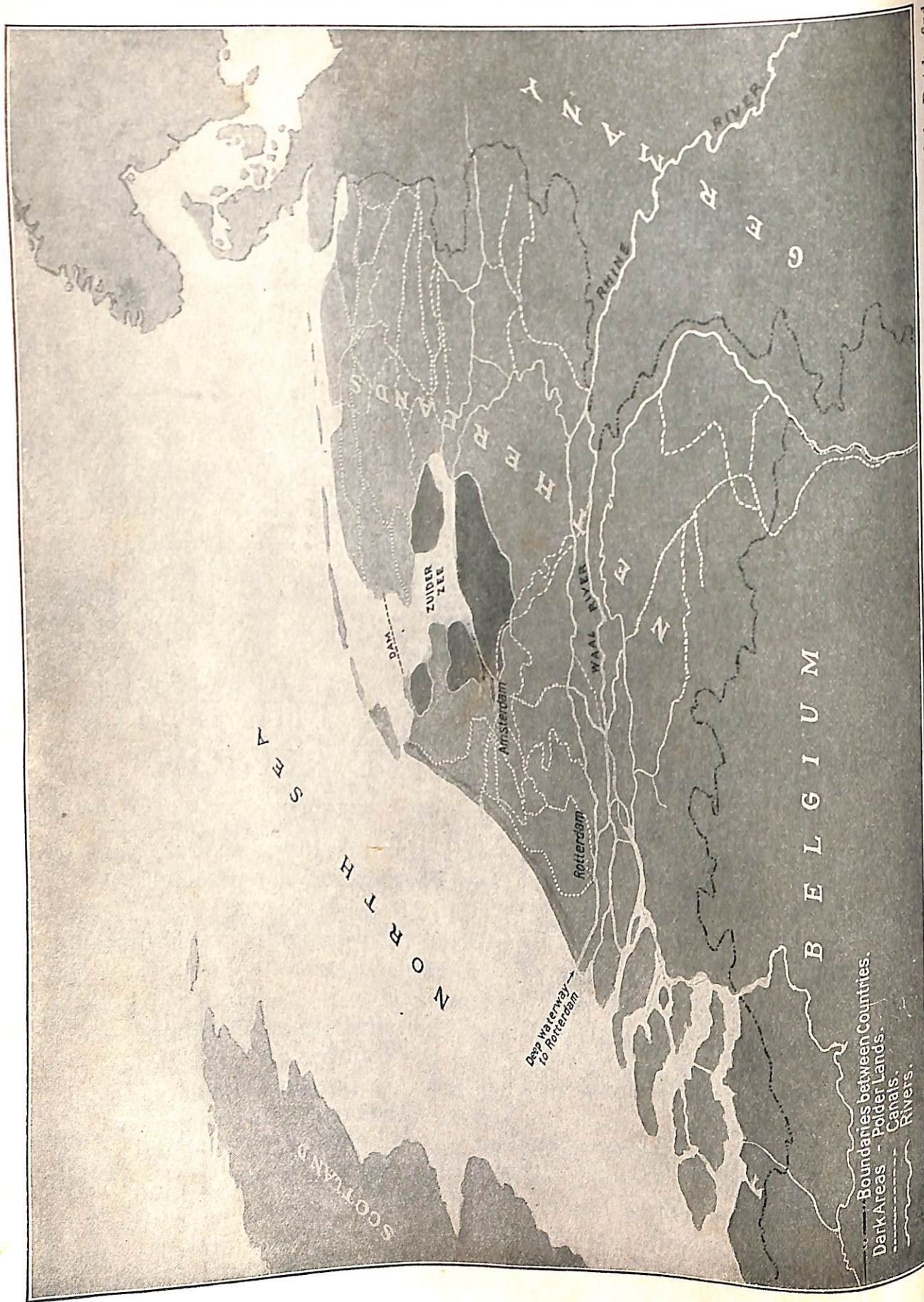


Fig. A. A map of the Netherlands, or Holland, the home of the Dutch people. As you read the chapter—Holland, the Home of the Dutch—find on the map each place mentioned in the text.

HU-1



Fig. A. An air view of the polder lands in Holland. Find five windmills, two canals, and a dike. Can you see where water is lifted from one canal into another?

and notice how many mouths this river has.

As we travel up the river, we see that some of the houses stand high up on the banks, while others seem to be very low down. We see only their roofs behind the river bank. They are down low indeed, for much of the land of Holland is below the level of the river and even below the level of the sea.

How can houses and land be below the level of the sea? The Dutch people can tell you. Many of their houses stand on an old sea bottom.

We might say that Holland is at war. She is at war all the time.

She has been at war for many hundred years. She is at war with the sea and with the rivers. The men mostly win in this war, but they can never give up the fight, because they must keep on pumping the water from the old sea bottom where they now have their farms, on land that they have conquered from the sea. Long before the United States was called the United States, Holland was so full of people that there was no more land for new farms. This made it cost a great deal of money to buy an old farm, because so many people wanted it. To get more land the Dutchmen began to make farms by draining swamps and shallow

HU-1



Fig. A. A canal in Holland in the summertime. Compare this picture with Figure 138-A. Could you make up a story about the things you see in this picture?

places near the shore. They had to move the water away before they could make their farms. They began this by draining the swamps and lakes along the rivers. (See map, Fig. 134-A.) First they built dikes to keep the river from overflowing into the swamps. Then they dug ditches through the swamps to carry the water from the swamps to the edge of the dikes beside the river. Here windmills pumped the water up over the dikes into the river.

Look around Holland in almost any direction and you will see the big arms of the windmills turning in the air. Wind power can be made to do a great deal of work. If you think that the wind does not have much power, just go out of doors and raise an umbrella when the wind is blowing hard some winter day.

Night and day, day and night, whenever the wind blows, the Dutch windmills swing their arms and pump water.

These lowlands from which the water must be pumped all the time are called *polders*. River polders are land that has been won from river swamps. Sea polders are land that the Dutch have won from the ocean. As the years went by, the Dutch farms got more and more scarce, and the price of the land got higher and higher. At last there were no more river polders to drain; so the people began to drain the ocean. The ocean is very shallow in many places near Holland. It has been almost filled with Rhine mud. To make a sea polder they start by building a high bank, like a railroad bank, to inclose a part of the ocean.

HU-1



Fig. A. "What a job," you say, "to fit all these big boulders into this dike!" The thrifty Dutch people did it, however, to keep the sea from their fertile land.

X When this part of the sea is cut off, the pumps begin to pump the water out. Sometimes this pumping goes on for years. Finally the bottom is seen. The land dries off, grass seed is sown, and soon the old sea bottom is a very rich pasture, for the river Rhine has brought down much rich mud, and there are many rainy days in Holland to help the grass grow. The polder pastures are green indeed.

See the map (Fig. 134-A). Much of Holland is old sea bottom. There are thousands of farms in places where once oyster shells grew, fish swam, and boats sailed about. All the rain water that does not dry up and all the sea water that leaks in must be pumped out. Sometimes

there will be three or four windmills in a row. They are called a gang. Each lifts the water three or four feet—almost exactly as the men do in the shawadif on the Nile.

Two things the Dutch must always do. As you already know, they must always pump water. Also, they must always watch the sea, because the sea is also always watching for a chance to win back what has been captured from it. If there comes a big storm, the waves may eat into the dikes or break through the low sand hills along the seashore, which keep back the sea in some places. The wind often blows piles of sand up along the seashore. These are called dunes. In some places the sand dunes make a natural

HU-1



Fig. A. A canal in Holland in winter.

dike along the Dutch shore, but sand dunes are soft stuff. The waves may beat them down or the wind may blow them away. The dunes will not blow away if they are covered with grass. Therefore the Dutch are very careful to plant grass on all their dunes and keep it there.

When the sea starts to beat a hole in the dunes with its storm waves, the Dutch build stone walls out into the sea at that place to stop the force of the waves. Sometimes they pave the shore with big stones (Fig. 137-A). They even build concrete walls in some places where the sea is very dangerous.

A few years ago the Dutch government started to make a new piece of land by draining an arm of the ocean called the Zuider Zee. When this is done, enough land will be

added to Holland to make a piece twenty miles wide and forty miles long. But how long do you think it will take the industrious Hollanders to do this job? Seventy years! The map (Fig. 134-A) shows that they plan to do it in four pieces. The first piece will take fifteen years. These pumps are run by large steam engines fed with English coal. The Dutch have dug many ditches to get the water off the level land, and many of these ditches have been made wide enough for small boats to go up and down them. A ditch on which boats can go is called a canal. It is easy to make canals in a country that is so flat, and where the earth is soft and easy to dig as it is in Holland. In no other country in Europe or America are there so many canals on such a small amount of

138-1



Fig. A. In Figure 147-A the people are dressed as in an American city. In this picture, however, they are dressed in native Dutch costume. The children have wooden shoes. See the caps which the women are wearing.

land as in Holland. There are nearly as many miles of canals as there are of roads. In many places there is a canal instead of a road, or instead of a city street. Often there is a canal with a road beside it. A wide city street may have a canal in the middle of it. Sometimes the farmers will haul their products to market in boats, just as American farmers haul theirs in wagons or trucks. I once saw a Dutch farmer hauling hay from his field to his barn on a boat.

In winter the canals freeze over. Then the people go on skates both for business and for pleasure. Sometimes the people will skate and push a loaded sled in front of them and take their goods to market that way.

In summer it is very interesting to go in a canal boat through Holland. The villages are sometimes only one row of houses along the canal. Often we see wooden shoes sitting

outside the doors. Wooden shoes keep the feet dry on the wet soil. Sometimes as you pass along on the canal, you can see children playing jokes on one another by hiding one another's wooden shoes that were set outside the door when the owner went into the house.

Miles and miles of these canals are above the fields beside them. This lets the boat traveler look down on the farms. If the canal bank should break, the water would run down and flood the farms. Do you think that we might call the Dutch a watchful people?

One of the most important men in Holland is the chief engineer of all the canals. Every Dutch boy who is ambitious would like to be this chief, this great official, the chief of *Water Staat*, as they call him. He is what the Dutch would call a big man.

Do you think the Swiss have many canals? Why? †

139-1

Do you think that the Dutch do more fishing than the Swiss? As I traveled through Holland, I often saw old men and boys sitting on the banks of a canal or a stream with fishing poles in front of them.

The storks and the storks' nests are interesting things that one can see while traveling on the Dutch canals. These long-legged birds walk about the fields looking for food. No one disturbs them, for people think they bring good luck. Sometimes they build their nests on the tops of chimneys. They spend the winter in Africa and come back year after year to the same nests.

THINGS TO DO OR TO THINK ABOUT

1. Here is a new game. We are going to give you one or more words and then a blank space. In each blank space you may say the name of the people that fits these words:

- Mountains
- Igloos
- Pueblos
- Pemmican
- Dense forest, rubber, Brazil nuts
- Reindeer
- Largest oasis in the world
- Windmills and canals
- Long camel caravans
- Fur trappers
- Black people hunting elephants
- Zebras and giraffes

2. Build a Dutch windmill and add it to the school exhibit. You may write a short story telling how the people of Holland use windmills. You may write the story on a card and pin it to the windmill.

3. Make a sand-table model of Holland. Have it show how some of the land is lower than the level of the rivers or of the

sea. Then explain how the people have come to live on this very low land.

4. Draw a large map of Holland and the water that touches Holland. How near the equator is Holland? How do you know? Draw a line on the map that will show this. Label it. How far east is Holland? Draw a line on the map that will show this also. Show the Rhine River and the Rhine delta. Name some of the tributaries of the Rhine. Show the North Sea and the Zuider Zee. What do we mean when we say that Holland is part of the Rhine delta?

5. Make sketches of a dike, a polder, a dune, a ditch, a swamp, a breakwater. Then tell what each of these has to do with the people of Holland.

6. Explain with a sand-pan model or a drawing how the Dutch are turning the Zuider Zee into farm land.

7. Draw a scene along a Dutch canal. How would this be different from a scene along the Suez Canal?

8. What makes the chief of Water Staat so important in the Netherlands?

9. Try to find pictures of Holland and bring them to school. Be sure to know the story of the picture you bring.

10. Make a sketch of the Rhine River and show all the streams that help its waters to reach the sea. Label a number of these streams.

11. Why do the Rhine, the Nile, and the Amazon rivers all have very large deltas, while some other rivers do not?

12. Copy the following and fill in the blanks:

Of the two countries, Holland and Switzerland, has more canals than But has more water power than This is true because

13. Point to North America, South America, Europe, and Africa. Name the people of each of these continents that you have read about.

14. Are the people of Holland more healthy and more intelligent than the people of the Amazon Basin? Give some good reasons for your answers.



Fig. A. This Dutch farmer has a windmill to pump water and to keep his land from being flooded. Sometimes he uses the mill to grind his grain into meal for the cows to eat. He has dairy cattle to graze on the thick grass of the level pasture lands and to give milk. He makes excellent cheese and butter from this milk.

THE DUTCH FARMERS

Holland has what we call a temperate climate; that is, it is not extremely cold like the climate of Eskimo Land, and it is not extremely hot like the climate of the Amazon Basin or the Sahara Desert. It is in between these two extremes. Holland is less than one third as large as New York State, but it has nearly three fourths as many people. How does such a little country support so many people? We shall see that the Dutch are intelligent, thrifty, hard-working people who make good use of what they have. To begin with, the Dutch use their land very well. Many of the low polders are too wet to be plowed. Some are so low that when you walk on the thick sod, it seems as though you were walking on a bag of moss, because

the soft mud beneath the grass sinks under your feet. This makes splendid pasture for the many cows that the Dutch farmers keep. These cows produce three times as much milk as the people drink. Most of this surplus is made into cheese. The Dutch people make very good cheese. The people of the United States are glad to buy tons of cheese made in Holland. The Dutch farmers buy corn and cottonseed from America, take it in their ships to Holland, feed it to their cows, and then send the cheese back to us. Sometimes the farmer will let his windmill grind the corn and other grain into meal for the cattle to eat. The potato fields on Dutch farms yield, on the average, more than twice as many potatoes an acre as do the potato fields in the United States.



Fig. A. A field of hyacinths in bloom in Holland. Do you know another place where Dutch bulbs blossom?

Flowers are the most wonderful crop of the Dutch farms. At Christmas-time perhaps you gave your mother some bulbs to bloom in the early spring. These bulbs may have come from Holland, for Dutch flower farms cover hundreds of acres and send tons of bulbs to the United States and other countries. In early April the Dutch bulb farms bloom with beautiful hyacinths. These are followed by tulips and by other flowers. It takes skill and much patient work to make a crop of bulbs. Some kinds of bulbs cannot be sold for blooming until they are six years old.

A few acres of land will give jobs for many people and will bring in a large amount of money if it is used for growing bulbs. In the same way

the Dutch grow little trees which they send to other countries to be planted in orchards, yards, gardens, and parks. By selling these bulbs, trees, and cheese, they get money to use in paying for wheat, meat, cotton, and other crops that are grown on the large farms in America and in other foreign countries. There are government schools in Holland where people are taught how to grow bulbs and trees.

THINGS TO DO OR TO THINK ABOUT

1. Pretend that the windmill in Figure 141-A had told you a story of its life and work. Write the story.
2. Tell from Figure 134-A one reason why Holland is a good country for farming and dairy cattle.
3. Tell how the farmers in the central and southern parts of our country help the Dutch farmer.

HU-1

DUTCH TRADERS AND DUTCH CITIES

Holland and Switzerland are about the same size. Both are used carefully and well, but Holland has nearly twice as many people as Switzerland. If you think of the surface of the two countries, you can tell one reason for this.

More than half the people of Holland live in cities. There is not land enough for them to live on farms. Holland has twelve cities with more than 50,000 people and less than 100,000 people. Switzerland has but three. Now look at this table. What does it tell you about the largest cities of these two countries?

FOUR LARGEST CITIES

HOLLAND		PEOPLE
Amsterdam (1933)	.....	772,364
Rotterdam (1933)	.....	586,804
The Hague ('s-Gravenhage)	.....	459,885
(1933)	.....	157,924
Utrecht (1933)	.....	157,924
SWITZERLAND		PEOPLE
Zurich (1933)	.....	312,600
Basel (1930)	.....	148,063
Geneva (Genève) (1930)	.....	142,812
Bern (1930)	.....	111,783

Why does Holland have so many more cities than Switzerland?

Many of the Dutch are traders. Look at the map of Europe. You see that Holland is on the coast. All ships from southern Europe to northern Europe and from northern Europe to southern Europe must pass the coast of Holland. You

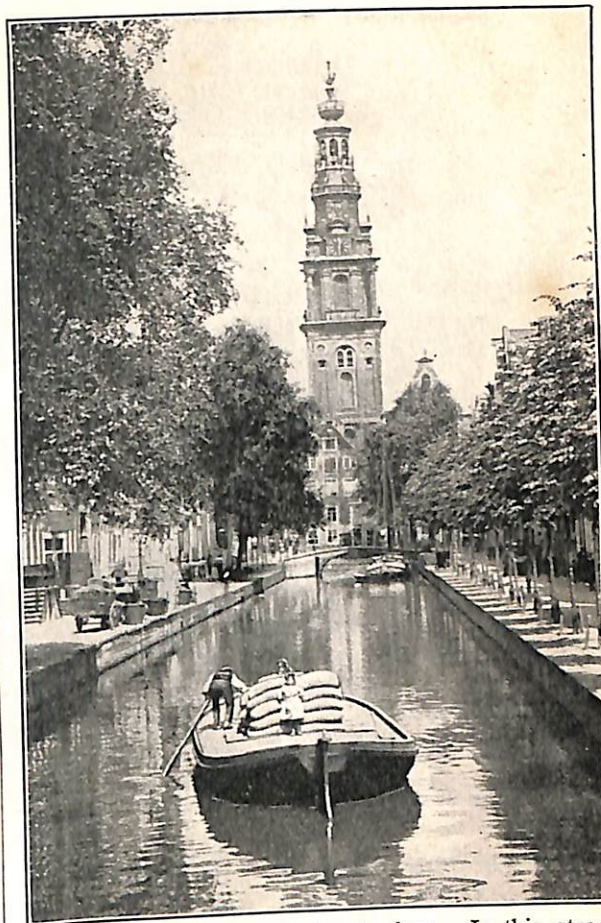


Fig. A. A canal street in Amsterdam. Is this street quiet or noisy?

remember also that we went to Switzerland on a steamboat from Rotterdam up the river Rhine. Many, many tons of the goods that go from America to Germany and Switzerland go up the Rhine through the Dutch cities. Many of the things that Germany and Switzerland send to countries over the sea come down the Rhine in boats and are loaded on to ocean vessels in the Dutch cities. You see that the Dutch seaports are ports for the people of Holland and of other countries also.

Look at the map again, and you

HU-1

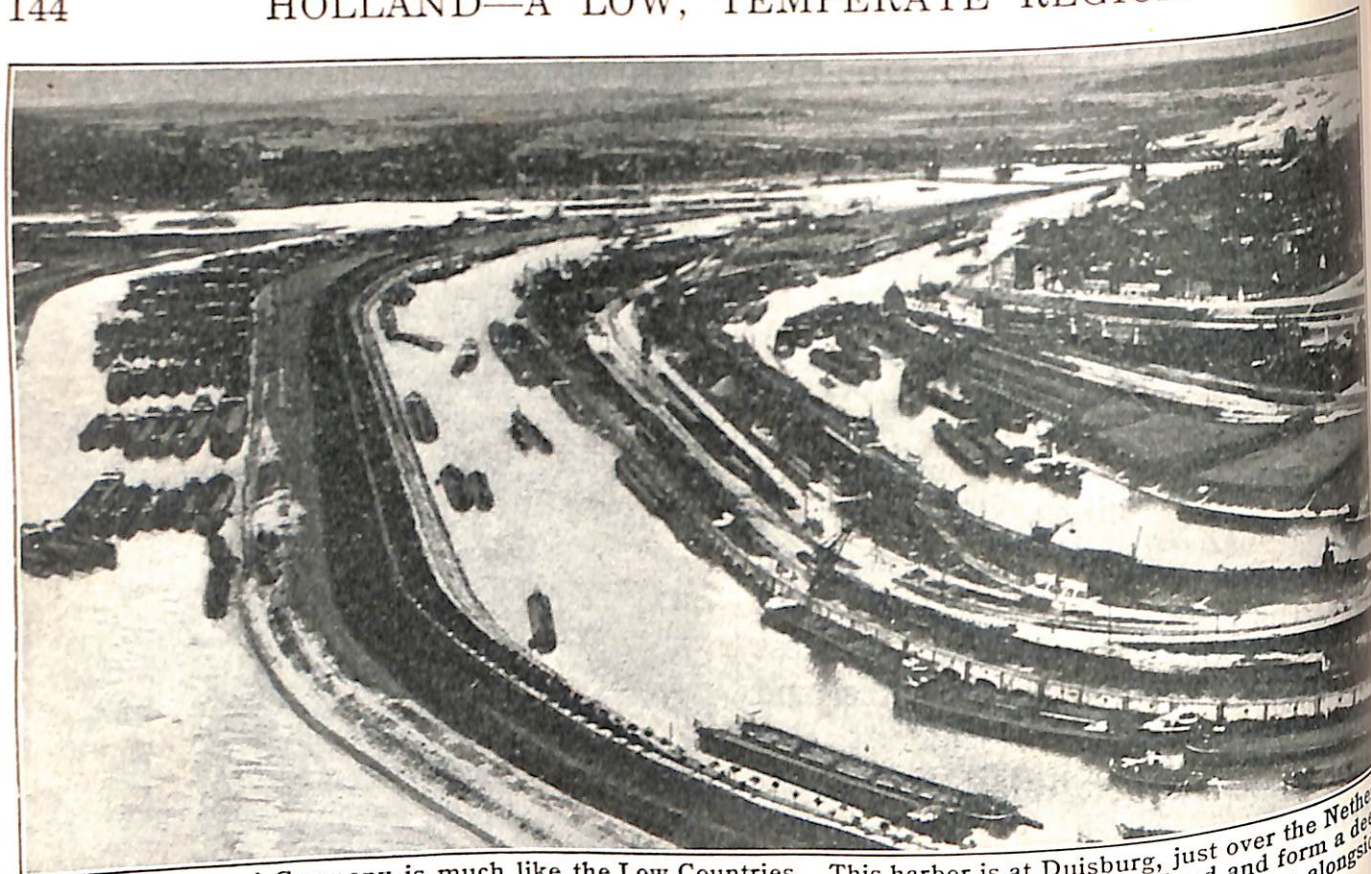


Fig. A. A part of Germany is much like the Low Countries. This harbor is at Duisburg, just over the Netherlands border, on the Rhine River in Germany. Big steam shovels scoop out the soft delta land and form a deep ditch. Then water is let in. The ditch becomes a dock. Ships load and unload in the quiet water alongside their piers.

will see that England is near Holland. Holland, you see, is located at a kind of crossroads. The roads from England to Switzerland and from northern Europe to southern Europe cross each other at Holland. That gives the Dutch a fine chance to sell things to the people of other countries.

For hundreds of years these farms of Holland have made a good food supply, and the people, when they were not busy with their farm work, spun yarn, wove cloth, and made other things to sell. Long ago Holland was the richest country in Europe, and the greatest country in making things to sell to the people of other countries.

The Dutch are also great fisher-

men. They get in their boats and sail out into the Zuider Zee and on out into the North Sea and bring back thousands of barrels of fish. They have been doing that for a very long time.

When the fishermen were not catching fish, they would load their boats with bolts of cloth and cheeses and bulbs and little trees and sail off to some other country to sell them. Then they would buy some of the produce of that country and bring it back to Amsterdam or Rotterdam. Thus the Dutch merchants would have goods from southern Europe and northern Europe on hand to sell to anyone who came there. By that means the cities at the mouth of the Rhine became trading cities.

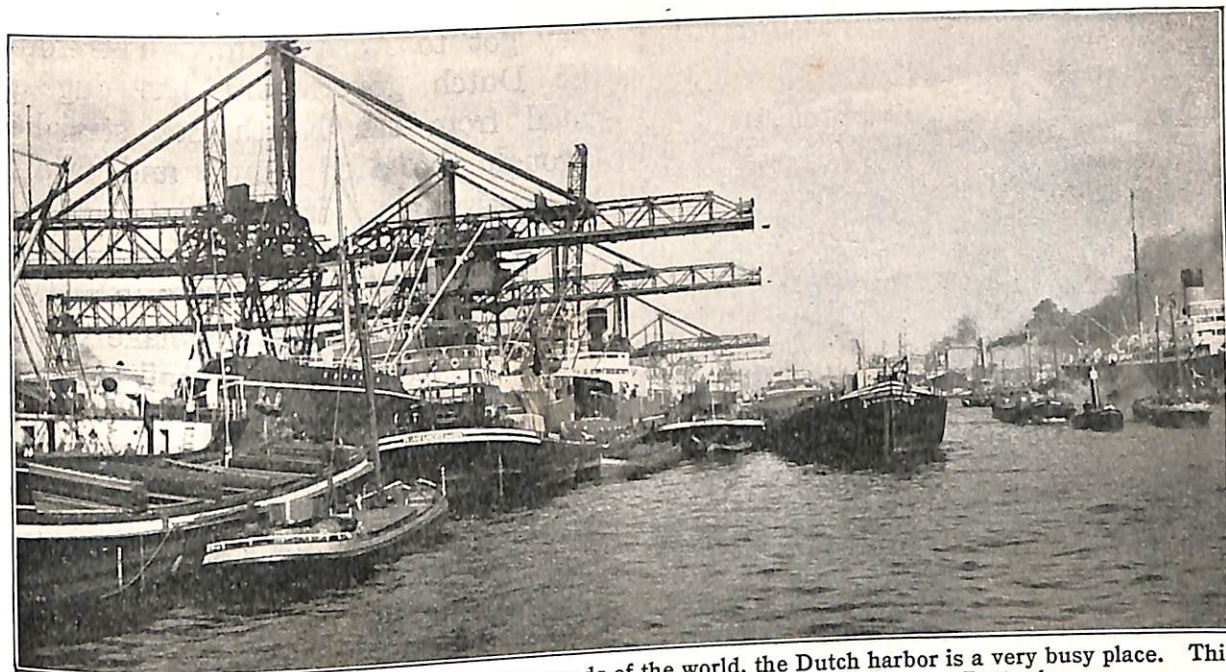


Fig. A. Because Holland is at one of the crossroads of the world, the Dutch harbor is a very busy place. This picture shows some of the many boats usually to be found in the river at Rotterdam.

Since the Dutch were good sailors, they sailed away soon after Columbus discovered America and took possession of some land far away southeast of Asia. It is now called Netherland India. Your teacher will show you on the globe where Netherland India is. These islands are many times larger than Holland, and they have several times as many people as the mother country has.

These islands are in the tropics. They have a rich agriculture. The Dutch manage much of this and own most of the factories, warehouses, and ships; so that many shiploads of the exports of Netherland India come to Holland. These islands send sugar to Holland and to several other countries. They produce over a third of all the rubber in the world and nearly all the

cinchona. Cinchona is the bark of a tree. It is used to make a medicine called quinine. The Dutch know more about how it should be grown than any other people in the world. Netherland India also ships tobacco, tea, coffee, nutmeg, cloves, and other spices. All these things come to Rotterdam, and other Netherland ports for sale to the Dutch people and to those of other countries.

The Dutch steamships now sail to every continent. They bring back the things the Dutch people want and take out the things the Dutch people have to sell.

How many languages do you suppose an educated Dutchman needs to know? It is not far from Rotterdam to the boundary of Germany, where they speak German, nor to the boundary of Belgium, where they speak French. It is a short distance



Fig. A. A cheese market at Amsterdam. In the piles are round Dutch cheeses. The boat in the foreground has sailed up one of the many canals as far as the market building. The cheese is unloaded directly from the boat to the market.

across the water to England, where they speak English; and a Dutchman in his warehouse will often in the same hour speak English, French, German, and Dutch as easily as a boy in an American school can talk about baseball, his lessons, and lunch.

The Dutch have done much hard work in helping to build up their trade. The old city of Amsterdam had a nice, safe harbor on the Zuider Zee. This was all right long ago when ships were little and did not need deep water. (Fig. 154-A.) The steamships we now use would stick fast in the mud long before

they got to Amsterdam. Therefore the Dutch government has dug a canal from the North Sea straight through the sand dunes and farms to Amsterdam. In the outskirts of Rotterdam they have had to make room for ships by taking nice farms and digging them out to make great docks where ships can sail in to load and unload their freight.

The harbor of a Dutch seaport is a busy place. Many little boats swarm around the big ocean steamers like flies around a lump of sugar. Some will be long boats that are loading to go up the Rhine to Switzerland. Others will be canal boats going to near-by Dutch towns and villages. Some may be little row-boats going a block or two in the city, just as we would use a truck or wagon in a town or city. Many streets in Rotterdam and Amsterdam and other cities are canals.

A Dutchman once said he knew a city where the people live at the tops of trees like rooks. What do you think he meant? He was talking about the piles, the trunks of trees that are driven in the mud as foundations for buildings in the Dutch cities. You cannot build a stone or brick house in soft mud. It must have a firm foundation or it will sink into the mud or possibly upset. The Dutch cities on delta mud have no firm foundations; so logs or piles are put down and the walls for the buildings are on top. Even by this means a heavy wagon rumbling along the street shakes



Fig. A. The city of Flushing, Holland, and its stone sea wall. The houses are built of brick. Deep in the ground beneath the wall are rows of piles. They give a firm foundation in the soft mud.

whole city block. The city seems as though it stood upon jelly. One big building in Rotterdam has 3,400 piles under it. You may see along the river a big stone wall. It looks so strong and solid that you might think it was founded on bedrock. Instead it stands on top of poles which have been driven into the mud. It is a lucky thing that poles buried in the mud do not rot. The water keeps them from decay. I saw a pile pulled out of the mud in Rotterdam when they were building a new dock. The harbor master told me that it had been put down in the year 1386. When he cut it with an ax, it looked as new as last year's logs. The ships that carry American grain and cotton up to Switzerland

often bring back piles and stones for foundation walls of Dutch buildings.

As the delta has no stone and there is no room for forests in Holland, most of the Dutch buildings are of brick made by burning Dutch clay with fire made of English coal. You remember that in Switzerland most of the houses were of stone or wood. These two things the mountains have and the delta country of Holland does not have.

THINGS TO DO OR TO THINK ABOUT

1. Find Netherland India on the globe. What important line on the globe passes right through some of these islands? What two other lands have we visited through which this same line passes? There is one important way in which all three of these lands help the world in exactly the same way. What is it?

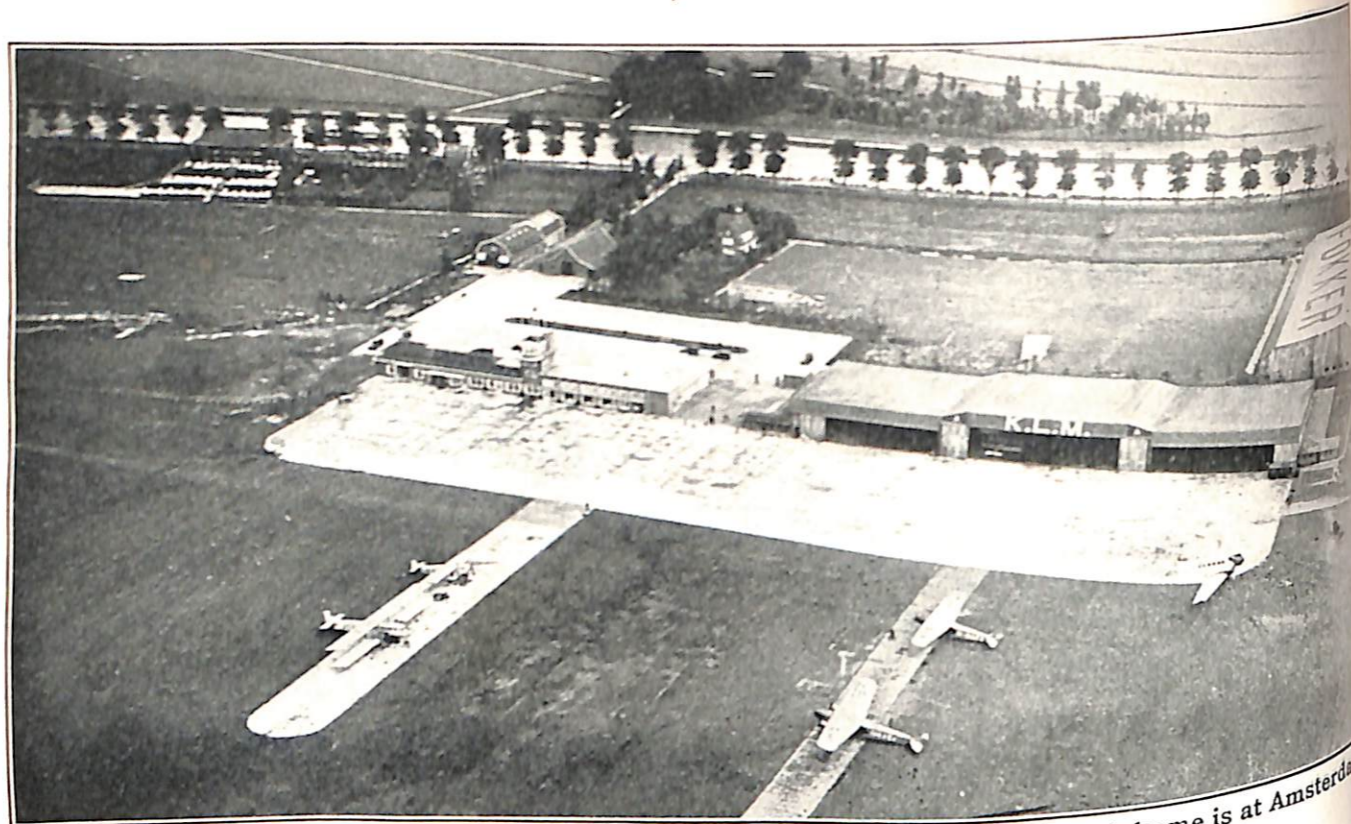


Fig. A. Airplanes are stored and repaired in buildings called airdromes. This airdrome is at Amsterdam, Holland. See the canals in the background of the picture.

FACTORIES AND PEOPLE

Many of the people of Holland make their living by working in factories. There are several good reasons for this. One is that the people are good workers. They are big, strong people; they are willing to work; they are intelligent; and they take good care of themselves. The boys and girls all go to school. Some people claim that Holland has the best public schools in Europe. There are no beggars. If people are sick or poor, there are careful plans made to take care of them. They are well looked after.

Holland has to buy many of the things she uses in her factories, but she can do this very easily. The ships sail into Rotterdam or Amsterdam between the dikes and green

meadows, unload the raw materials for the factories into boats which run down the canal, and in an hour or two they may be at the factory door. Some Dutch factories send rayon and other artificial silk to many countries. Others send electric things and radio materials. Others send paper. Some send iron. To make iron the Dutch buy their coal from England and their iron ore from other countries, and their ships unload this coal and ore right beside the iron plant. Can you tell why the Dutch have a better location for factories than the Swiss have, and why the Dutch rivers are better in one way and worse in another?

Some of the milk from the Dutch farms is mixed with the chocolate from Africa and made into

chocolate. Others take palm oil from Africa, tallow from the United States, soy beans from China, and some milk from the Dutch cows and make something they call margarin, which tastes like butter. The Dutch send margarin also to other countries. Even with all these factories, it is often very difficult for a young man to get a job in Holland. Therefore many educated Dutch people work in other countries. Not long ago one of the Dutch engineering colleges found that a third of its graduates were working in other lands.

Before railroads and steamships made it so easy to travel, the people of different valleys or towns or countries usually had their own style of clothes. The Dutch had some very interesting-looking clothes. A few of the Dutch people still wear the native costume (Fig. 139-A), but most of them now dress like the people in the United States; and we in turn dress as do most of the people of European countries. Trains and boats and books and pictures are doing much to make the people of many countries look alike, act alike, and think alike.

This lowland of Holland is the best known lowland in Europe, but Europe has several other lowlands. Indeed, Holland's neighbor on the south, called Belgium, has some of the same kind of land that Holland has; and Holland's neighbor on the east, called Germany, has some of the same kind of land, although it does not have so many people to the

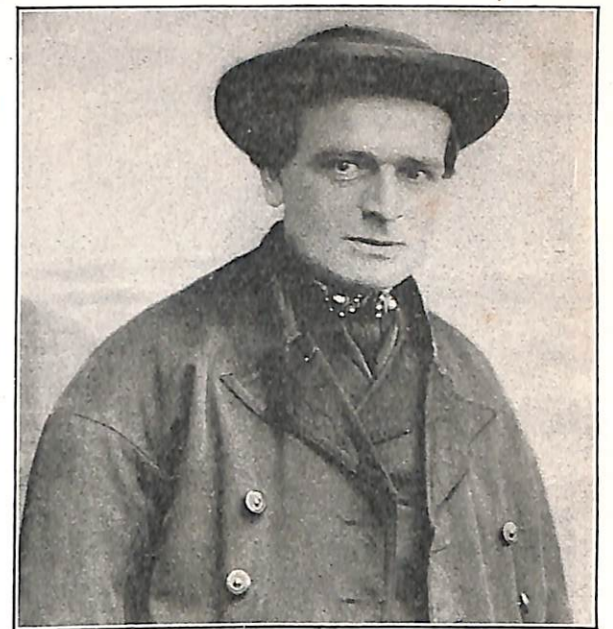


Fig. A. This man lives in Walcheren. Find Walcheren on Figure 134-A. It is the little Dutch Island nearest Scotland. The man is a farmer. He put on his best clothes in order to have his picture taken.

square mile as does Holland. Perhaps your teacher will tell you something about a square mile of land near your school.

In northern Italy is the Po Valley, another famous lowland; and in the west of France, near the Bay of Biscay, your map will show that there is another lowland. The east coast of England is another lowland. We will learn more about those lowlands in another geography book, which we shall study in another grade.

THINGS TO DO OR TO THINK ABOUT

1. What do we call goods that come into a country? What do we call goods that a country sends to other countries? Make a chart of *Dutch Imports and Exports*. Make this like the chart about Switzerland. Be sure to show the difference between the goods from Holland and those from Netherland India by print-

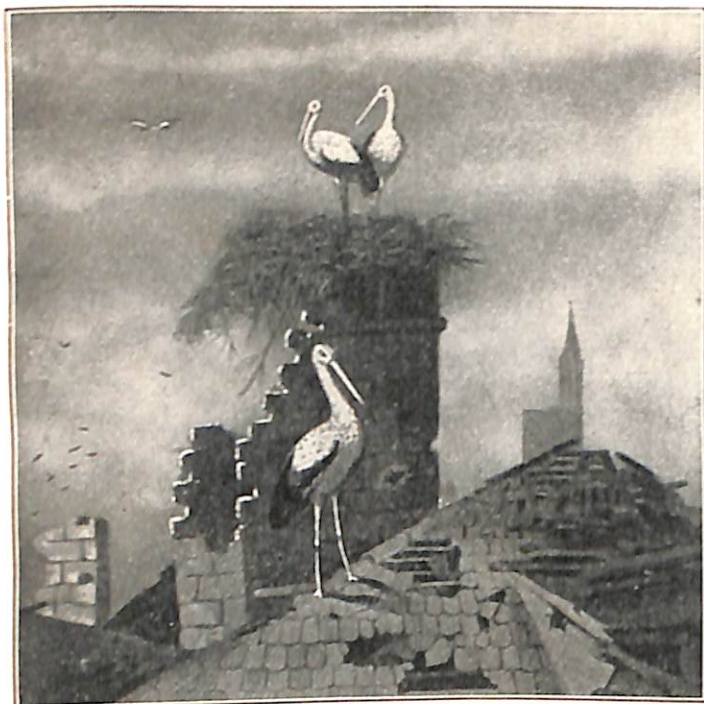


Fig. A. The birds are storks. They have made a nest on top of an old chimney in a Dutch city. Where will the storks spend the winter (page 140)?

ing the letters *N. I.* alongside the products from these islands.

2. Add the four largest Dutch cities to your map and to the location lists.

3. Add this trip to the map of *Trips That We Are Taking.*

4. Do you know what a debate is? Then you also know what the word *Resolved* means, do you not? So divide the class into two teams and have a debate about this: "*Resolved, That Switzerland is a more interesting place than Holland in which to live.*" Be sure that one member on the Swiss team and also one member on the Dutch team tells about some one of these topics:

(a) The kind of food the people eat, and how they get it.

(b) The kind of clothes they wear.

(c) The kind of houses they live in and why.

(d) The kind of work they do, and the tools they have to help them.

(e) What they use to heat their houses, and where they get it.

(f) What they use to run their machinery, and why.

(g) What the boys and girls and the grown-ups do to have fun.

(h) How each country helps the rest of the world.

(i) How the rest of the world helps each of these countries.

(j) The scenery of each.

5. Here is a drawing that you will want to make so carefully that you can keep it. Divide a large sheet of paper into five parts. In each part, make a sketch that will show one good reason why so many people in Holland live in cities. When you have finished, show your paper to the rest of the class. Then the class may vote to choose the drawing that tells this story the very best.

6. Suppose you had your choice of living either in Holland or Switzerland. Then suppose that you wanted to choose the one in which you could learn most about trading with the rest of the world. Which one would you choose? Why has this country become such a large world trader? Why are there so many Dutch sailors?

7. How are Rotterdam and Amsterdam like some cities in our country? How are they different?

8. Why are the large cities in Holland larger than the large cities in Switzerland? What do we mean when we say that a city is large?

9. Count the houses in a certain distance on a city street, on a village street, and on a country road. How many people do you think you would find in each? Which has the greater density of population?

10. Make a sketch of a Dutch scene that everyone would know was Holland, even if you did not label it.

11. Where would you expect to find the people working harder, in Holland or in Netherland India? Why do you think so?

12. Would the rivers in Switzerland help the people more? Which of these countries would the rivers worry the people more and give them more work? Why?

13. Make up some plays about the Dutch people getting land from the sea and about what they do with this land.



Fig. A. A part of the harbor and city of Gloucester, Massachusetts. Why are there so many ships in the harbor?

SOME PEOPLES OF THE SEACOAST—NEW ENGLAND, NEWFOUNDLAND, NORWAY

GLOUCESTER, A FISHING PORT

This is going to be the finest chapter yet for making a lot of plays. And for every play we make, we are going to draw a quick, rough sketch on the blackboard to show just what the scenery of the play looks like. Then, maybe, some of the artists in the class might like to copy these rough blackboard sketches on large-sized cardboard. If they would, we could keep the cardboard sketches for movable scenery and repeat all the plays for the school assembly.

* Sam Lawrence lives in the city of Gloucester, a small seaport on the Atlantic Ocean. The boy is ten years old. He wants to own a fishing boat when he is a man. The people of Gloucester have been fish-

ermen for more than three hundred years. In 1623 some English fishermen sailed into the harbor at Gloucester, anchored their ships, and built some racks for drying fish. Then they built their houses and sailed out to sea and began fishing. From that day to this, fishing has been their chief business. Sam's home town of Gloucester is the greatest fishing port in the United States.

Sam's father owns a fishing schooner. This boat is named *Hester*. The fishermen of Gloucester often name their boats for their children, and *Hester* is Sam's sister.