

THE FASCINATION OF
SWITZERLAND
LIEDNA WALTER

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THE FASCINATION
OF SWITZERLAND

BY THE SAME AUTHOR



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BRITTANY**

CONTAINING 24 FULL-PAGE ILLUSTRATIONS
FROM PHOTOGRAPHS

**THE FASCINATION OF
HOLLAND**

CONTAINING 24 FULL-PAGE ILLUSTRATIONS
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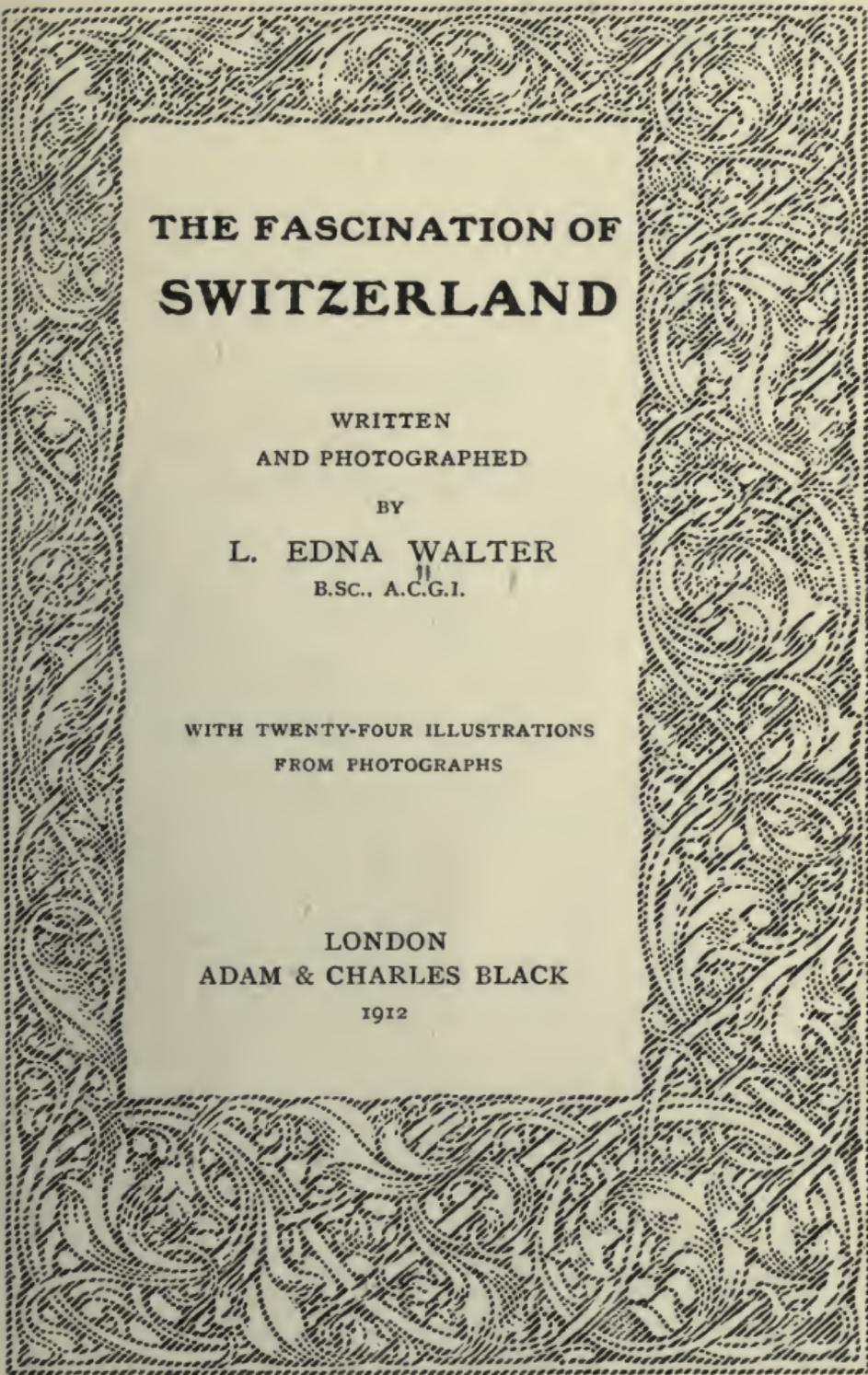
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THE MATTERHORN. *Page 45.*



**THE FASCINATION OF
SWITZERLAND**

WRITTEN
AND PHOTOGRAPHED

BY
L. EDNA WALTER
B.Sc., A.C.G.I.

WITH TWENTY-FOUR ILLUSTRATIONS
FROM PHOTOGRAPHS

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PREFACE

I wish to acknowledge my indebtedness to Mr. W. H. Dixon's "The Switzers," and to Mr. W. A. B. Coolidge's "The Alps in Nature and History," with its valuable maps and diagrams.

L. EDNA WALTER,

MANCHESTER,
January, 1912.

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SWITZERLAND

CHAPTER I

THE SWISS COMMUNE

ALTHOUGH we regard the government of Switzerland as republican, it is very different from the Republic of France, or from that of America. There is a president, but he is merely the Chairman of the Federal Council, has no more influence than any other member, and certainly possesses none of the really royal power exercised by the presidents of the other two republics. He does his work quietly for a year and then retires, before the people have time to learn his name.

Switzerland as we know it to-day is a country of gradual growth, and has been welded out of many different states, each state in its own different way being built up of small communes.

A man's primary political position is as a member of his commune, and the commune has existed from the most ancient times—from those early centuries when the German race, pressing

the Celts on the south and west, parcelled out the conquered land as farms to different families in proportion to their size, and kept one plot common to all. That was the time when there were open-air meetings of the freemen, in the presence of watchful priests, to make laws, decide on war, and elect officers—usually from amongst a privileged class.

But as there were Tuscans in the Rhine Valley and Burgundians in Savoy, it is not to be supposed that the communes in any one state resemble those in the next, and so even through the ages some distinctive features have remained to most of them.

They differ in size : in the Grisons, for instance, there are four times as many as in Canton Geneva. Some have a thousand citizens, some scarcely a hundred. We may compare the commune with the English parish, but there is no parish church round which it clings. Whether great or small, the Swiss commune is considered as the cradle of Swiss political liberty.

Although the different communes vary in size and in local laws, there are naturally certain points in common. In each there is a list of all the men of voting age—it may be twenty years or it may be sixteen, according to the commune—and once a year these either vote by ballot for, or assemble in school or field to elect by show of

hands, their mayor and four or more councillors—the Gemeinderath. No one can refuse the office nor can shirk his work, whether he serve for two or six years.

The first duty of mayor and councillors is to keep the list of all the commune, so that no one be admitted by mistake to the sacred privilege of its membership. For the last century, too, there have been schools to think of. The primary school has to be built and looked after. No corner in the shadow of the church is chosen for its site. It must have the best position in the village. No one there calls out that the presence of the school and children will depreciate the property in its neighbourhood: the school is the pride of the commune. The councillors watch the children both in and out of school, and admonish any parents whose duties are not performed as the commune expects them.

Should a boy be expelled from school he cannot re-enter till the mayor has given his permission, and his interview with the mayor will not be a pleasant one.

There is a stream to be bridged—the Gemeinderath sees to it; drainage to be done, water to be provided, the poor to be helped—the village council attends to all. If a man wants to marry he goes to the mayor, and until almost the

end of the nineteenth century, when the whole Swiss Constitution was revised, the mayor used to refuse permission whenever he could. The existence of a commune has always in every country tended to check the growth of population. The commune has property—land, forest, water-rights—and the greater the number of members the less is the share of each. So the simple laws of political economy are brought home to every peasant, and it is little wonder that the mayor viewed with a cold eye every application for permission to marry, and refused it when he could.

There was one famous case (described by W. H. Dixon) where a certain Aloïs Arnold of Attinghausen in Uri wished to marry Geneviève Guebey from Savoy. The mayor wouldn't hear of it—at least not unless a fine of £23 was paid. But how were Aloïs and Geneviève to get £23? So Aloïs went quietly to Savoy, married Geneviève with the blessing of a priest, and lived there under a kinder rule. After a few years he and his returned to Uri. The paternal mayor refused to recognize the marriage, and the commune turned its back on Geneviève.

In vain did Aloïs appeal from the commune to the Canton. The Cantonal Council turned a deaf ear, knowing that Aloïs's story was a common one, and knowing also how those communes would

resist any interference with what they considered their rights and liberties.

So the case of Aloïs's was one of many cited in 1874 to produce a change in the Federal Law.

The commune also made it difficult for a man to be idle, and in fact still does. It will in fact turn out a loafer if necessary by paying his fare to another country.

It will be no use for him to try to enter another commune—the mayor will ask too many questions; and in fact till recent years it was extremely difficult to enter most communes.

Every commune fixed its own rules for this. No commune would take one who had been a criminal, or who was diseased. The Catholic communes, like those of Canton Freiburg or Appenzell-inner-Rhoden would refuse to admit a Lutheran. Others, like Vallais, would admit a man from another Vallaisian commune, but not one from Vaud. All charged a price for admission, and all put the price higher for married than for unmarried men.

Lausanne used to charge £20 for any other Swiss to enter her commune; for his sons and daughters £6 and £3 each respectively. If the son was married she put up her price from £6 to £14.

In some cantons the communes are free, and have so been for almost a century, and Zürich—

intellectual, throbbing Zürich—has long opened her doors to all. Any Swiss could, with certain legal forms, fix himself in any commune of Zürich, and no prohibitive fee was allowed to be exacted. Protestant, Teutonic Zürich has always taken the lead in Switzerland in all matters of liberalism and freedom, and Zürich is the most prosperous and most powerful of the cantons.

CHAPTER II

THE CANTONS

EVERY country in Europe, as it stands now, has been built up by the adhesion of a number of petty kingdoms, duchies, counties, and what not, and Switzerland is no exception. Each of her cantons as we know them now was at one time either a separate State with sovereign power of its own, or formed part of a larger sovereign State. Burgundian or German Dukes held the reins in various parts even when Charlemagne in the ninth century counted their lands as part of his "Empire of the West," and sent Frankish Counts to uphold his authority. Empires however rise and fall and by the eleventh century the Frankish Counts had vanished. Both Burgundian Dukes and Frankish Counts had, robbed the people wherever they held sway, and in spite of communes and councils the "freemen" had not much liberty to boast of. They were not much better off when the Counts departed, for the place of these was taken by a martial nobility who, by the time the thirteenth

century had arrived, had established themselves in comfortable possession of all the public offices and dignities.

The Church prelates and religious foundations were not to be outdone by the nobles. They too turned the Feudal System to good account, and if they gave away things spiritual they were careful to receive back things temporal.

The city commonwealths of Berne, Solothurn, and others were drawn into the same chaotic feudalism, for the rich and prosperous burgesses grasped the power, and "commonwealth" for the other citizens ceased to exist.

Altogether about 200 of these nobles, prelates, or burgesses took the name of their manors and turned their offices into a sort of freehold hereditary title, endeavouring to hold them almost independently of the Empire of Germany, to whose King Henry III. they were vassals in the thirteenth century.

Amongst these great nobles there was Peter of Savoy, sufficiently renowned to give his sister in marriage to our King Henry III. Another was Rudolf of Hapsburg, who made himself ruler by right of sword or gold over estates and towns from St. Gall to Berne.

Rudolf was so powerful that he was elected King of Germany in 1273, secured the Duchy of Austria for himself by conquest, and placed



ABOVE ROSENLAUI. *Page 26.*

stewards in all his lands, including the states which we call Swiss.

The three forest states—Uri, Unterwalden, and Schwyz — began to resist the Hapsburgs who thereupon gave orders to their stewards to be specially tyrannical.

If Werner Stauffer of Schwyz had a fine house he must be insulted and told that peasants could not be suffered to live in such style. If Walter Fürst of Uri had money, he must be taxed and fined.

As young Arnold of Melchthel was driving his father's fine yoke of oxen in Unterwalden, they were taken from him. When he resisted and fled for his life, the steward in revenge put out the father's eyes.

But the Hapsburgs underrated the innate love of freedom in the canton peoples, and forgot that the Alps bred a race that is fearless and bold.

These three patriots gathered round them others, strong in muscle and shrewd in thought. On a certain night each of them brought a band of ten: sinewy herdsmen from Schwyz, robust peasants from Unterwalden, fearless mountaineers from Uri. There on the Rütli overlooking the Uri branch of the Lake of Lucerne, on a November night in 1307, these three-and-thirty men took the old oath of "all for each and each for all," and swore to save their cantons from oppression

and tyranny. The sun sent his first rays upon their uplifted hands.

Uri produced yet another and more famous hero. Gessler the most arrogant of stewards had placed his hat on a pole in the market-place of Altdorf for all to bow before it. William Tell, proud and free, refused. He was seized, and ordered with a sneer to win his life with his archery. An apple to be shot from his son's head was the task, and Tell accomplished it. But a second arrow in his quiver aroused Gessler's curiosity. "Had it injured my son, this second shaft should have pierced thy heart," replied Tell, and Gessler in fury had him chained in a barge to be taken across the lake. He was to keep his life but only in a dungeon.

Near Axenstein a storm arose. Tell was famous as a sailor, and as he alone had skill enough to save the boat he was unbound. He steered to the rock at Axenberg; in a moment he had seized his bow and arrows and jumped ashore alone. On he hastened to the defile at Küssnacht, where Gessler must pass if he were not drowned. He did pass, and received Tell's arrow in his heart.

So runs the story, and if historians find fault with the dates and dispute the facts we can answer that the story accurately symbolizes the spirit of the time and has inspired many a brave



TOWARDS THE GREAT SCHEIDEGG. Page 26.

deed since. Besides, has not Schiller placed this story in eternal literature, and is there not Tell's Platte to fix the place of his landing ?

The forest cantons kept their oath, and bit by bit won back their independence till the Austrians learnt at the Battle of Morgarten that mountaineers though peasants are men. Those accustomed to stem the avalanche know how to create one, as the Austrians found to their cost when they were swept to their death by the rocks sent downwards by a handful of the men of Schwyz.

It was not long before the cantons of Lucerne and Zürich, followed by Zug, Glarus, and Berne, joined the League which had been inaugurated by the three forest cantons.

As the centuries went by other cantons were added to the League—some of them unfortunately as subject states ; for those who had fought for freedom forgot in the hour of victory that freedom was dear to others too. But the cantons though leagued for mutual defence, were still only independent states, and no republic.

Internally there were troubles : ruling families swayed the common folk ; the trade guilds swayed the big towns, and the big towns swayed the peasants—always the wealthy taxing the poor. So the men of the peasants sold their strength for foreign gold. For two centuries they went as

paid mercenaries in the armies of King or Pope, while patriotism waned. They took bribes from France: even Zürich listened to the oily words of Louis XIV., until he had tricked all the little states into being practically his vassals.

During the eighteenth century these little states had been growing nearer together owing to wars on their borders, and it was in 1798 that France thought she would teach Switzerland—whom she still regarded as under her protection if not actually a vassal—how to be a model republic. Napoleon looked at the map, disapproved of it, and made a new one, grouping small cantons together and dividing big ones. He drew up an Act of Union, fixed one code for cantons which had hitherto been accustomed to make their own laws separately, and as an artistic finish presented the new Republic of Helvetia with a highly coloured flag.

In return for his kindness Napoleon annexed Geneva and Neuchatel—cantons which had not yet joined the League. France was to possess a new “Department du Léman,” with Geneva as its capital. One by one the cantons announced to Napoleon what they thought of his fine schemes. The herdsmen of Schwyz refused to be grouped into any composite canton; they had made the name of Schwyz famous, and they intended to keep it. Uri refused to unfurl the

green and yellow flag. Catholic Appenzell-inner-Rhoden never had agreed and never would agree with Protestant Appenzell-outer-Rhoden, so it was no use for Napoleon to try to unite them.

In a dozen battles they announced to Napoleon that they would have none of his new republic; their own ways had suited them for the last four centuries or more. Let Napoleon teach liberty elsewhere!

Of course, they won no decisive victories, but they were very annoying; so Napoleon in disgust determined to leave them alone for a time. He knew what would happen. They fought among themselves. So in 1802 Napoleon overlooked their former ingratitude and helped them again.

This time the vassal cantons were freed, and the total number grew to 19 states. A little later there was again the little matter of payment to be considered, and this time it was Vallais—Vallais, with its unscaled Matterhorn and unstemmed Rhone, with moreover those two useful highways the Passes of the Simplon and Great St. Bernard—which he exacted.

Some good however he did. He stopped the internal warfare which had been raging between the cantons as a sort of echo of the European strife beyond, and he formed a standing army. The arts of peace succeeded those of war, and the cantons busied themselves with building mills and

founding schools. After Napoleon's fall quivering Europe set herself to study her own map. Switzerland was released from any tie to France, and was recognized as an independent nation, while Vallais, Neuchatel, and Geneva were restored and added to the League.



THE DEVIL'S BRIDGE BELOW ANDERMATT, Page 27.

CHAPTER III

MODERN GOVERNMENT

IT was not to be supposed that these twenty-two cantons with their different races, different religions, and different speech—Teuton, Celt, Protestant, Catholic, German, French, Italian, and Romonsch—could agree. In 1847 civil war broke out between Catholics and Protestants; but in 1848 fear of foreign invasion brought internal peace, and helped to weld together the opposing races and creeds into the sturdy little nation which we regard as Swiss.

All her citizens have the love of country in their souls; all are trained to defend their country, and most apparently nowadays put patriotism before creed. There is a lingering relic of the old days of creed hatred in some of the cantons where Catholic and Protestant live together. On the day before Good Friday in St. Gall the Catholics have a holiday; not so the Protestants who take Good Friday instead. According to custom, the afternoon of the holiday is spent by everyone in taking a walk. Through the fields

and up the valleys go young and old, men and maidens. But no scent of the fresh-growing grass or awakening nature greets the Protestant holiday makers. The Catholics have chosen that day to manure all their fields !

The different cantons have different ways of governing themselves.

Some, like Geneva and Lucerne, elect a sort of Parliament. Every man who is neither an idiot nor a criminal votes for members of a Grand Council. The Grand Council elects a smaller State Council, and these two "Houses" elect a President, or Landammann. The three embodiments of authority make the laws, and from them no one could appeal till the Referendum was adopted a few years ago. Geneva, however, is conservative, so she changes her members as seldom as possible. They are elected for ten years at a time, and a few old rich families have arranged matters so that they are always found in the State Council. It is a relic of the old feudal times with a sporting element of election thrown in.

But the smaller cantons, like Uri, Schwyz, and a few others have no Parliament. No representative shall make their laws: they will make them themselves. It is true they must have officers to carry them out, or even to draft them ; so every year in these cantons there is a meeting of the



THE GRIMSEL HOSPICE. *Page 28*

citizens to elect the Landammann and officers for the coming year.

The ceremony differs in detail in different cantons but in principle it is the same. Every man attends to take his part in a democratic government.

The meeting has its light side as well as its serious one.

In Appenzell-auszer-Rhoden on a certain Sunday in April a long stream of citizens will wind its way to a certain field near Trogen. Each man carries a sword—this symbolizes his right to fight for his country. Each man also carries an umbrella—this symbolizes nothing except the waywardness of April. Every man wears a sort of top hat ; these hats have all begun life as black, but decades of time have changed their tint to every shade from green to red. The swords too show every variety of form, and are older than the hats, some of them having come down from the days of William Tell. The permanent officials come in gorgeous robes—the only official robes that exist in the country. In the Catholic cantons such as Appenzell-inner-Rhoden the priests and their comrades form a new feature at the opening of the meeting, and add a torchlight procession at the end.

In each case the meeting opens with prayer. Then usually one name is proposed for the Lan-

dammann, but if there are two a show of hands settles the matter. There is no speech-making or canvassing, a slight exception being made when the Weibel (Secretary) dies, when each applicant for the post makes a statement of his qualifications, and the electors decide between them.

At another meeting the Landammann will take his seat and the Weibel reads out the list of matters to be settled. Some officer is to be promoted, some stream is to be bridged, some road repaired, a new tax is to be imposed, an old law to be altered. Speakers support or oppose and the assembled freemen of Appenzell accept or reject each item by uplifted hands.

Before the end of the meeting the whole assembly takes the oaths of fealty to the laws of the country. Every man raises his right hand aloft, the combined movement producing a sound like the wind through the trees.

It must be admitted that the presence of both sword and umbrella is a little embarrassing at this moment, but usually the owners set aside symbolism for a time and resolutely grasp both in their left hands. After the taking of the oath each free and independent citizen of Appenzell quenches his thirst, lays by his sword, and devotes the rest of the day to festivities. To avoid jealousy the assembly does not take place always in the same

village, and Hundwyl will succeed Trogen as the centre in alternate years.

Canton Zürich has long had a specially democratic form of government. The men of Zürich elect no representatives to govern them; they send up to their Cantonal Council men employed and paid to do their bidding. The Councillors draft a Bill, and the Bill is then submitted to the judgment of the canton. Every man has a voting-paper, and writes upon it his "Aye" or his "No." He drops it into the ballot-box at the Town Hall, at the railway-station, or at the school; the canton sees to it that everyone finds a ballot-box handy. When the papers are counted, if the "Noes" win the Councillors learn that they have not satisfied their masters, the men of Zürich. This is the famous Referendum, and during the last half century all the cantons have adopted some form of it, except priest-ridden Freiburg. In seventeen cantons too, the citizens can call for a new law on a certain subject almost as easily as they can order goods of a certain kind. Truly the citizens of the cantons keep their law-making in their own hands!

Finally there is the Federal Assembly which stands not for the cantons, nor for the communes, but for Switzerland. Its two houses are the National Council—of members representing

every 20,000 men—and the States Council comprising two members for each canton—forty-four in all.

The two houses elect the Federal Council of seven members, including the President.

As in our country an ordained priest cannot be a Member of Parliament, so in Switzerland neither priest, nor monk, nor pastor can sit in either House of the Federal Assembly, or even be made Landammann of a canton, though a Protestant pfarrer, not being ordained, can give up his office as preacher, and be made Landammann if chosen.

Voting is to the Swiss a serious matter which he prizes as a right and fines are inflicted on a man who abstains from voting. Even in local matters a man may be fined who does not go to vote on the election of a new teacher in the public schools.

The ballot is used in all the national elections, and it is worth noting that no representative may canvass for votes. They make no speeches, they receive no mandate; they go up with perfect freedom to vote in the Assembly as their conscience tells them.

In the early days of the Federal Council it had very little power, and each cantonal deputy called to conference at Berne, or Lucerne, or Zürich went back to those who sent him thankful if

they accepted what he had agreed to, but quite prepared to find that they would not.

But in 1848 a great Federal Pact was made between the leagued cantons, when the separate cantons gave up some of their sovereign rights to the League.

Each canton coined her own money ; now there became a Federal Mint.

Each canton exacted customs at every bridge and road ; now there are the Federal Customs at the Swiss frontier.

Each canton sent ambassadors to Foreign Courts ; now each country receives the Minister of Switzerland and the League, while the capitals of the cantons acknowledge Berne as the capital of the League.

Most important of all, each canton trains every man as a soldier, but it is the League which calls him to battle ; and he then fights for his country, not his canton, and follows the national flag.

Before long however the limitations put upon the actions of the citizens in some cantons, the tyranny of priests in some communes, and of mayors in others, caused a great wave of desire for revision of the Pact. It was resisted by some, of course. Vaud was afraid she might be made to admit men of Berne to a share in her large communal wealth ; Freiburg was afraid of losing her

persuasive power of excommunication ; and Vallais trembled for her gaming tables.

In 1874 however the Pact was revised and the new Constitution was modelled on the existing Constitution of Canton Zürich, the citizens or the cantons being able to demand the Referendum when they like.

Now a man of Berne, thirsting to settle in the land of Tell, can go and take his part as a citizen of Uri and a resident of Altdorf ; no paternal mayor or haughty Landammann can treat him as an outcast or fine him for entering. He cannot, it is true, claim a share in the communal property without paying his footing, but the Federal Assembly sees to it that the payment is not a fine.

And at last the Confederation undertook to protect the right of marriage: Henceforth Alöis can marry his Geneviève, be she Teuton, Celt, or Hottentot, without the permission of his mayor. Should she come from the Torrid or the Frigid Zone, no tax can be levied by a commercial commune as payment for her right of entry.

Freiburg sees a blow aimed at her power of excommunication by the law which says that no force may be used against any citizen on account of religion. She groans afresh as she sees the re-enactment of the law forbidding the order of Jesuits to settle anywhere in the country, forbidding all action in church and school to its

members, and compelling them as Swiss men to serve their time in the army. She fears too lest the Federal Council shall inquire too closely into her free primary instruction. The Pact says it is to be "sufficient," but who knows how Zürich and Berne will interpret "sufficient"?

Altogether Freiburg is not happy, and trembles for the fate of a country which forbids the founding of any new convents.

Vallais breathed and gambled, or as she said, allowed foreigners to gamble for a year or two longer; then came an amendment to the Pact in 1877, and all gambling houses had to close.

Such is the constitution under which the Swiss live.

Little wonder that there is now no recognized aristocracy, though a few old families persist in some of the towns like Berne and Zürich. The head of the house may even be a Graf or a Von; if he has money he keeps the title, if he has not he drops it, and all his children keep it or drop it for the same reason. There is no relic of the old feudal system but the weathered stones of an old castle planted on some towering rock. There is of course wealth and poverty, but no one has a right to claim any position on account of birth alone, and no one despises his neighbour. The doctor and the guides will drink their beer together in the restaurant of the hotel and discuss

over it all the topics of the day. The young pastor or lawyer will come back from his University and spend his summer holidays in acting as waiter in his father's hotel ; he will even put up with a bed in the photographic dark room when the hotel is thronged with guests.



A VILLAGE SCHOOL : GOING HOME. Page 46.

CHAPTER IV

THE UPWARD FIGHT

MEN of the Mountain-land must war with Nature more than most—must wrest their food from a reluctant soil, and push their lodging nearer to the snows.

Every year sees the Swiss pushing upwards and onwards. A track is worn to an upland Alp; the track becomes a road, the road widens, and the diligence appears; a few years later a railway succeeds the diligence.

A few years ago Grindelwald was a remote village; then the road grew and widened; then the burghers of Interlaken financed a railway, and with cogs and wheels it grips its way upwards, panting and snorting till it deposits its load at the Eiger's foot. Not too often must this railway run its trains, nor too conveniently; the burghers of Interlaken cannot allow travellers coming from afar to hasten away. They must delay an hour or two in Interlaken, that they may dally in the burghers' shops and feast in the burghers' hotels.

No sooner is the railway made than the village pushes its way towards the Scheidegg, and hotels, shops, and pensions follow with annual increase up to the Wetterhorn Inn. Already on the other side of the Scheidegg, a road has mounted from Meiringen to Rosenlauri, and even beyond. Soon it will replace the track to the Scheidegg, the Grindelwald road will meet it, diligences will race over the pass, and a fine hotel will replace the modest inn at its summit. The Gleckstein Hotel has already appeared on the Wetterhorn at a height of 8,000 feet; a road is being blasted to it, and a hanging railway swings high up above the terminal moraine of the Upper Glacier. In time it will carry crowds right up to the Gleckstein, and who knows when a town will appear on the top of the Wetterhorn?

In Canton Vallais, pines and firs—the outposts of the mountain timber—used to extend down to Sierre. But as they fell before the woodman's axe, fruit and nut trees crept up with him from below, till Brigue and then Fiesch were passed. Now the peasants reap their corn at Ulrichen, 4,380 feet above the level of the sea. The Furka Pass is higher than the Gemmi, but the road goes up from Fiesch and winds in mounting curves to Gletsch. Here the Grimsel zigzags meet, it and a busy village, full of stamping horses and clanging bells, rests on the bank of the baby Rhone.

On from Gletsch mounts this wondrous road, and within fifty yards of the séracs of the Rhone Glacier you change horses and sip your tea at an enormous hotel, or you stop the night there and watch Jack Frost tracing his floral pictures over the windows during dinner.

At the very top of the Pass, 8,000 feet high, you can quench your thirst, abate your hunger, buy picture post-cards, and post them to your friends in England. The railway is already up to Brigue ; in a dozen years it may be over or through the Furka Pass.

At present, although the Furka way is often snowed up even in June or August, inn and châlet follow each other down the military road, till Realp clusters into a hamlet and Zumdorf throws in a church beside the Reuss, on the way to Hospenthal.

No difficulties daunt the Swiss. He must move upwards and onwards, and where there is no road he must make one. Andermatt and Hospenthal are 1,100 feet above Goeschenen, but they had to be reached. The Reuss raced downwards by leaps and bounds ; her walls towered on either side, but they had to be blasted and shattered till a resting ledge could bear the thrust of a spanning arch, and the Devil's Bridge carry men upwards through the glistening spray of the foaming fall.

If they could build granite bridges and roads like that in 1830, we need not be surprised at the road to the Grimsel Hospice, hewn out of the smooth, glacier-worn rocks above the Aar. It took nearly seven years to build, and cost millions of francs, but it was begun and carried through without a break by those indefatigable and persistent Swiss Teutons.

The Grimsel Hospice was, like many others, founded by some old-time monk, who left the sin of the valley and sought for silence nearer heaven. He found some hunter's shelter, an empty hut of wood or stone without a bench and without a hearth. He added a bench; he built a fire; he gathered food. Some wanderer, driven by the gathering storm, found there rest and shelter. It became known, the monk called in a brother; they built on other and stronger walls and the little hut became a hospice. The hospice grew and poor travellers were aided with food and rest. Richer travellers helped to swell the pious funds, until the day came when the brothers were dispersed. Then a layman saw his chance, and the hospice became an inn. A big and busy inn it now is, with crowds of visitors halting at its doors every summer's day. New buildings have grown on to it, but the old walls are a yard thick and show that the monks built not for years but for all time. The old idea of hospitality is still kept

up, and a big room is set apart to harbour the very poor who are toiling between the valleys of Rhone and Aar.

Another story comes to us from the Lake of Lucerne.

Two hundred years ago some cattle straying on the slopes of the Rigi wandered upwards to the fertile terraces, and were followed by their herdsmen. So good was the grass on these sun-warmed Alps that the men put up huts for themselves, and the commune of Arth added a chapel, known as the Chapel of Our Lady of the Snow (*Maria zum Schnee*), which was served by a monastery of Capuchin monks. How it came about is not told, but miracles were spoken of and the miracles grew. Pilgrims came from Altdorf and Arth, from Lucerne and Vitznau, and the fame of *Klosterli* on the Rigi spread abroad. Still however those who came to the Rigi lingered rather under the fig, the chestnut, and the almond trees of her sunny base than climbed upwards to the Kulm. About a century ago a few had mounted to the very top and discovered the wondrous view over lake and forest, mountain and valley. The story of hut, inn, and hotel, was repeated. Now a railway mounts from Vitznau to the Kulm Hotel, crosses the ridge and descends to Arth, with a station at the miraculous shrine of Our Lady of the Snow!

The Hotel now crowning the Pass of St. Gothard rears its walls close to the old chapel and hospice where travellers across the barren treeless waste found solace and refuge on their way. Teutons from the north pushing south, Celts from the south going north, all met at the top, mingling German with Italian speech. Now they rush through the great St. Gothard Tunnel and choke for half-an-hour in ten miles of darkness. The piercing of the mountain took seven years, and was viewed by some as almost sacrilegious. From 1871 to 1878 the engineers measured and levelled and calculated; walls were blasted, springs were sealed, but each in turn exacted its toll from the workers.

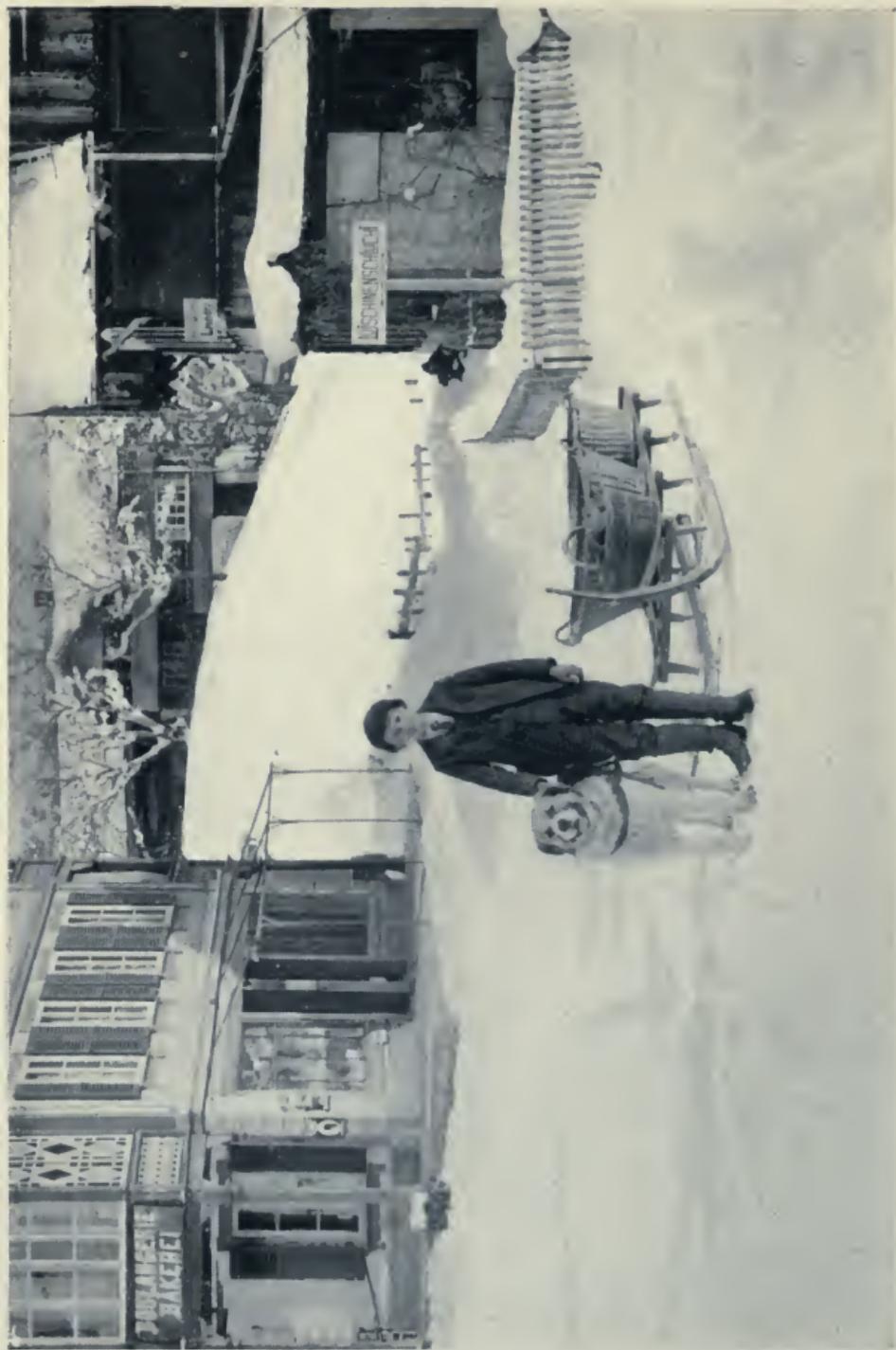
Turning, twisting, and climbing, the Gothard line winds upwards from Altdorf, and a compass on the train behaves as one bewitched. After half-an-hour the line leaves the Reuss's stern grey valley flanked by snow-capped heights, and emerges into the unshaded rays of a bold victorious sun beating down upon Airolo.

But the men who drove the first engine through saw no poetry of contrast; slope and gradient filled their thoughts, and if they had a mind for temperature at all, it was to regard the journey as a hot and anxious one, let the direction be north or south. Mountain railways are now so common that a day's journey can hardly be taken without

a rack and pinion addition to the gripping wheels. One of the earliest climbing railways was beyond the Swiss borders over the Mont Cenis Pass, and an opinion of the nerve-testing ride was forcibly given to Whymper by one of the English drivers in 1871: "Yes, mister, they told us as how the line was very steep, but they didn't say that the engine would be on one curve when the fourgon was on another and the carriages was on a third. Them gradients, too, mister, they says they are one in twelve, but I think they are one in ten at the least; and they didn't say as how we was to come down them in that snake-wise fashion. It's worse than the G.I.P. [Great Indian Peninsula Railway] mister: there a fellow could jump off; but here, in them covered ways, there ain't no place to jump to."

The old English driver of the seventies would find Switzerland now full of little trains going up and down in the "snake-wise fashion" that troubled him so much. And as for gradients, what would he say to the Cable Railway from Lauterbrunnen up to Mürren, with its starting rise of more than 1 in 2; or the one to Monte San Salvatore by Lugano, where the last pull of the rope is to drag you up a rise of 6 in 10? Little wonder that the carriages are tilted and that each compartment is a foot or so higher than its neighbour.

To a geographer mountains are barriers; to a climber they are heights to be scaled; to the Swiss, who live at their feet, they are now merely sporting obstacles, to be surveyed, blasted, and pierced.



THE BAKER'S BOY. Page 47.

CHAPTER V

SCIENCE AND NATURE

THE fight of the men of the mountains with Nature does not end when he has climbed and cleared some higher ledge and fixed thereon his hut and goat. He sleeps with danger at his door. An avalanche, a landslip, a fall of rocks may carry away to-morrow what was firmly fenced to-day. The rains may flood his land, the wind tear off his roof, the lightning strike his hut.

Long has he made his roof to slant that the winter snow may not crash through it; he even roofs his bridges, where the snow lies long and deep. But a sloping, overhanging roof is easy prey for the wind, and so he weighs it down with heavy stones. These are simple things and known to all. But deeper skill must come from science to guard against flood and avalanche, and sometimes even science fails.

Every mountain village possesses its flood brigade, who are trained to cope with water as the men of lowland towns are trained to cope with fire. Meteorology is to them no idle study, its

charts no aimless record to attract a wandering eye. The rainfall must be watched with care, and when day after day its record runs into centimetres the brigade sharpens its axes, marks down its timber, and looks to its signals.

From Canton Uri the Klausen Pass leads by the base of the Clariden Stock and its sweeping glacier over into Canton Glarus and the valley of the Linth, which nestles at the foot of the mighty Tödi and its white-crested neighbours. Its fertility shows in the thick green of its hollow ; its factories contrast almost picturesquely with the peaks ; waterfalls leap from the mountain sides ; cascades enliven the dancing brooks. Prosperity and wealth mark the course of the Linth and a railway runs down its valley from Linthal. Summer visitors ride upwards to take the baths of Stachelberg or climb the Tödi crests ; while waggons speed downwards heaped with the valley's wealth, for spinning-wheels and timber works make men busy by the little stream. A sturdy and industrious folk live on its banks, but it is a folk that forgets not that it lives amidst mountains while the hum of the mills is in its ears. The Linth has been known to sweep over the meadows before, so its banks are made firm and planted with trees, and the six bridges of the railway are built high and strong. Still, few visitors looking down on the prosperous valley in the

spring of 1910 would have had a thought in which terror and ruin would find a place.

Yet on June 7 men woke up to find the barometer down to 711·5 millimetres. They looked at the Linth; it was swirling and grey; the mountains were shrouded in cloud and their sides sodden. The rainfall crept up slowly during the next week. The Fätschbach falls in the upper part of the valley were tossing rivers of water over the rocks; tributaries of the Linth were trying to rival the main stream; dry courses had become rivers. Still the rain fell; and then came the terrible night of June 14, when the rain fell, not in torrents but in sheets, and the rain-gauge at Glarus recorded 130·3 millimetres. The Brumbach cut across to the Linth by way of a spinning-mill, overturned and broke the entire machinery on its way, broke open factory doors, threw down the man who was trying to save the goods, and hurled him to death by its inrushing force—that was at Linthal. Even two chamois were so frightened on the heights that they fled through the woods and took refuge in the low-lying meadows.

At Adlenbach the Linth rose up to the very rails of the railway bridge, across which the trains crept cautiously as though afraid of wetting their wheels.

As the rain continued, the men of Elm turned

watchful eyes towards the Tschingelberg, as their thoughts went back to 1881, when the landslip had cost them 114 lives. Terror reigned in Luchsingen when the inhabitants looked out upon a swirling lake. A cannonade of rocks and earth had burst the embankment of the Rufiruns, and driven it from its own bed to join the Linth; it had torn down all the bridges, and no man knew where the deepest torrent rushed. The town and station were in dire danger.

Up came sixty men of the Glarus Volunteer Fire Brigade, who by planting planks and poles tried to lead the erring stream away from the railway—at one place 10 feet under water! There was no time to be lost. Great stretches of the railway were already broken down, sleepers and telegraph-poles crashing one after another into the racing river. But the sixty men of Glarus spared themselves never a minute; wading waist-deep, lifting, barricading, bolting, they at last drove back the wandering stream into a safer channel. All through the valley every man gave of his strength. Little groups went by night with lanterns to watch the bridges and to put up their temporary erections, only to see them carried away, and to repeat their labours again and again.

Further down the valley the river deepened, the floods widened. In Näfels, on June 15 at 4 a.m., everyone woke to the hoot of the fire horn

and sprang to his feet at the cry of "flood." The little brooks Reuti and Tränke usually dancing so lightly from the mountains, were now rushing in wild torrents through the roads; a mad river swirled down the main street so that even by the school the water was nearly waist deep. Every man set himself to barricade his home, and to try by means of planks and cement to keep the water from his dwelling rooms. At 7 o'clock the muffled alarm bell sounded afresh. The little streams were all embanked but now the stones began to wash loose, and boulders thundered along the beds and sides. At the peril of their lives the brigade strengthened the embankment, and with long poles pushed aside the trees and stones which the rushing stream brought down with attacking fury.

At 8 o'clock the water was rising in the streets, and the rain still falling from the skies. Despair would have overcome a people less hardy and patient. The Linth bridge was threatened; some rustic Horatius hastened over it and as its middle section crashed away, iron chains were dragged across, with which men strove to link up the two still standing ends.

Landslips on every side drove the stream hither and thither, making the floods black with mud. The scene of devastation and waste which met the eye on every side was repeated at every

town and village down to the lake, till the end of the month brought clear skies once again.

Landslips they cannot prevent, floods they cannot stem, but just as in 1388 they shook off the Austrian yoke, so now these men of Glarus put stout arms and brave hearts to the work of guiding the forces they could not conquer. And how well they learnt and obeyed the laws of science might be seen when the death roll was counted. Only two men were killed in this Linth valley in all the catastrophe of that June.

Against the avalanche the pines play their part, and well do the foresters of Berne and Zürich know how to train their trees in the art of defence. But every canton is not Teutonic, nor every commune scientific. Some communes are full of those who trust in Saints rather than in science ; and Nature paying no attention to Saints visits with terrible punishment those who neglect her science, so it happens that many a village has earned destruction by neglect of her trees. Most of the communes possess forest land, and among the mountains the forest stretches up to the snow-line. Here and there the snow will find an easy path as it rolls down when the vernal sun has started a falling mass high above it. With quickening speed and gathering mass it will rush to the valley below, tearing away rocks, uprooting trees, and carrying away châlets, if nothing is done

to stop its murderous onslaught. Hence it is that on those well-known paths the forester fixes his thoughts. He plants his pines in well-ordered rows so that the slipping avalanche meets a wedge of trees at the very start; its velocity is checked, its substance broken and dispersed. The trees bend in front of it, and rise again as the hindered snow goes feebly on. All below is safe and the forester rewarded. Sometimes the snowfall has been excessive, and the trees do not merely bend, but are broken and destroyed. Then the forester goes with axe and spade to plant a hardy sapling in the room of each fallen defender.

But there are some who in the chill of autumn cannot look forward to the melting sun of spring, and who to feed their fires cut down the trees which should guard them later on. Mr. W. H. Dixon tells of a certain village—Selva by name—which nestles in a narrow valley below the Ober Alp Pass in that outlying canton of the Grisons, or, as some call it Graubünden, through which runs the Vorder Rhine. Its little stone houses cluster round a Catholic Church, above which tower the Milez Alp and Crispalt Horn, edged with a straight wall of rock. Upon the Alp above the rock grew pines. The artless Selvans took no note of the snowy sea above that Alp and cut down the pines. A heavy winter produced a

result which warnings had foretold. The loosened snow from the Crispalt rolled down to the Alp, crept over it and fell — fell for hours. The villagers fled from their homes, to return and find them demolished and covered by the snow, their goats and cattle swept into the Rhine. They rebuilt their houses in the same place as before, and again the same thing happened. The villagers considered it was the will of the Saints and a man reckoned the loss of his home and flocks three times in a lifetime—but to reduce the loss, he built his house each time less strongly than before.

But after the worst avalanche Berne interfered ; she sent engineers down to look into the matter. The peasants whose own stupidity had brought their ruin asked for money : Berne gave them pines and looked after the planting. Further than that, she prohibited the use of the woodman's axe, and since then Selva has been spared.

It is little wonder that in 1885 a clause was added to the Federal Law bringing forests, river improvements, roads and bridges under the eye of the State. The State did not undertake to manage them, but reserved to itself the right to interfere should the cantons or communes court disaster by neglect.

Fire is another enemy to be reckoned with, especially where some narrow valley acts as a flue



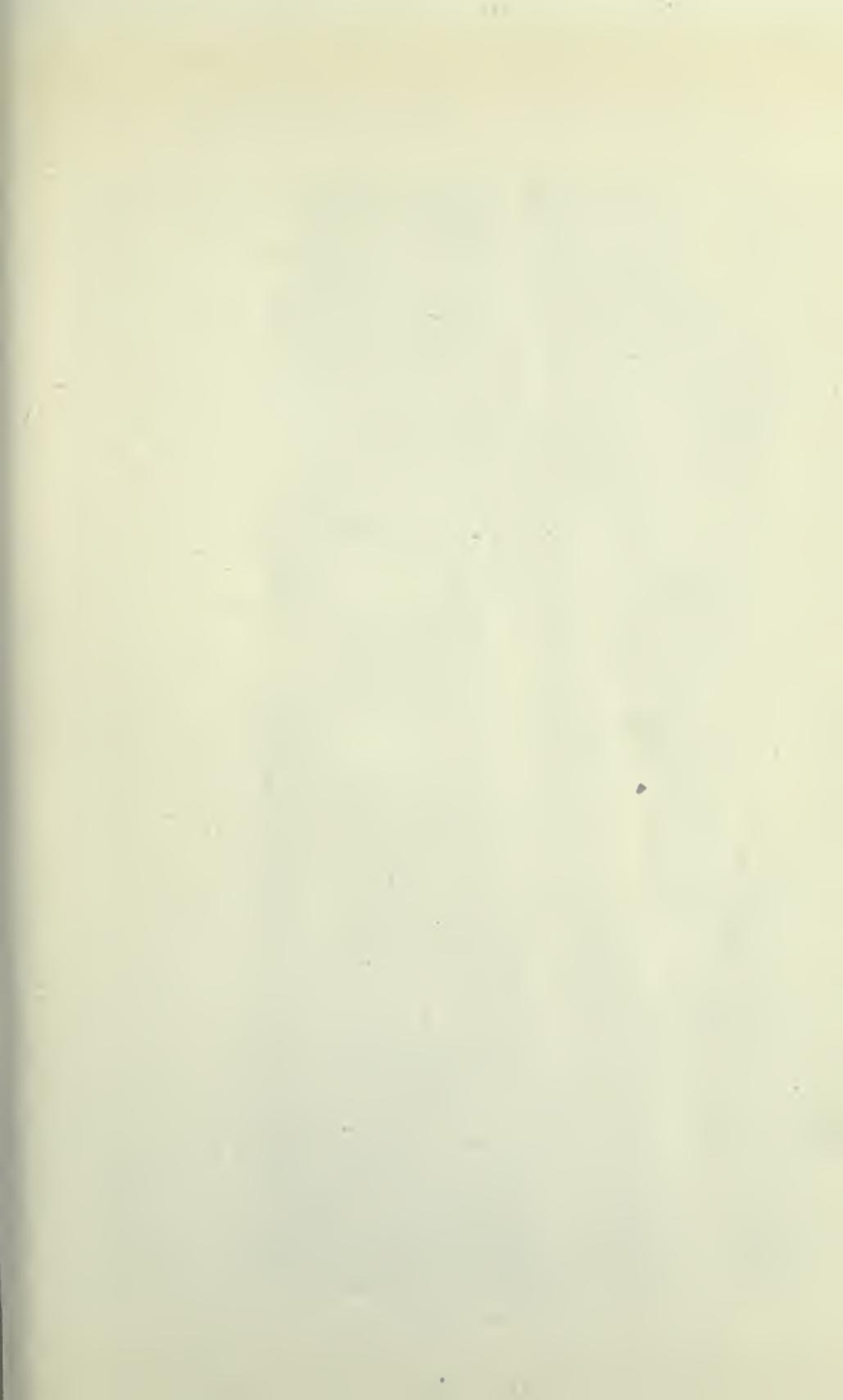
BRINGING DOWN THE HAY IN WINTER. Page 47.

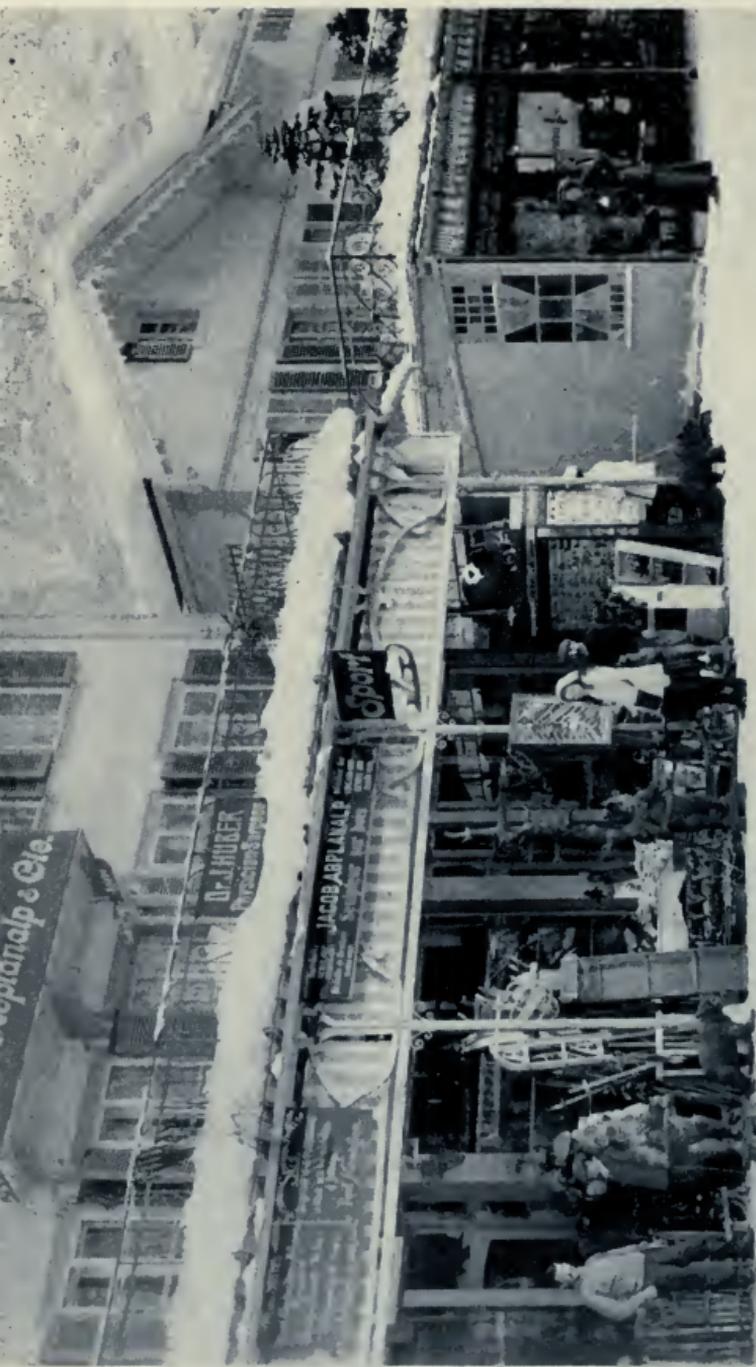
to a smouldering pile. Twice has the village of Grindelwald been a prey to this devouring dragon, and so even in the depths of winter, when the Föhn wind appears, the order goes forth to put out all the fires. The baker's oven is closed down; the peasants have a cheerless hearth. In the big hotels, where central heating is the system of warming, the boilers are allowed to be kept going, but firemen are alert and watch each corridor through the night. A stove in some glass-covered verandah is put out, and this informal meeting-ground is deprived of its genial welcome to snow-covered skiers or tobogganers. The men suffer great hardship, for no smoking is allowed indoors. One spark would be enough to start a blaze, and the warm Föhn wind blowing right up the valley would carry the blaze from hotel to shop, and shop to ch[^]alet, till once again beautiful smiling Grindelwald would look with sorrow on the smoking embers of her ruined village, and her blue carpet of the spring would grow unheeded, while the air resounded to the sound of saw and hammer.

CHAPTER VI

THE GUIDES

You cannot stay long in the summer in a mountain village without realizing what a big part climbing plays in its life. Groups of men may be seen balancing themselves on one of the rough field fences which here and there interrupt the continuity of the village street. Most of them wear a large silver badge. This shows that they have passed their full guide's examination, and are qualified to take you up all the peaks in succession. The badges show in relief a coil of rope, an ice-axe, and an alpenstock—the symbols of the profession. The men are generally short, smoke a good deal, and crown their heads with a soft felt hat of some unbecoming greenish-yellow hue. Here and there a younger man will smarten himself by wearing a Norfolk jacket, and substituting knickerbockers for the slouching trousers of his elders. He will probably add a second badge to his possessions—the red cross on silver of the Swiss Alpine Club. It is astonishing to note how very much swagger a very young guide can some-





A WOOD-CARVER'S SHOP IN THE WINTER. Page 48.

times put into his walk through his own village, but fortunately he usually leaves the swagger behind when he is about his business. The men are all waiting for a new engagement, or they are resting like their employers before making another ascent. In bad weather they suffer daily disappointment, and look forward to hard times in the winter.

It is only within the last half-century that there has been a qualifying examination for guides, though as early as 1825 the Chamounix guides had organized themselves into a society. Thirty years passed before any other climbing centre followed the precedent of French Chamounix, and then in 1856 the guides in the Oberland formed themselves into an association, to be followed half a dozen years later by those of Pontresina, and since then by those of other mountain regions.

In the old days anyone who wanted to find his way among the snows took as his guides any peasants who would volunteer to show him the way. But the guides would then be wanted for stern necessity, not for pleasure. It would not be tourists making holiday who were seeking for guidance, but those anxious to return over a pass by a path easy enough in the summer but upon which winter had now descended. It might be a band of pilgrims returning from Rome by the Pass of the Great St. Bernard, or students stored with

knowledge from the Italian universities making for the north by way of that of St. Gothard. Even as far back as the twelfth century the peasants at the foot of the passes were prepared to assist travellers, and had learnt the use of iron spikes which they fastened on their boots to give them foothold on the slippery ice. They wrapped up warmly even covering their hands, and carried an alpenstock to prod through the snow for the hard paths. Spiked iron soles, or "crampons," continued to be used for many centuries, and sometimes indeed were applied to the hands, but in recent years their use has been discontinued, and now few are seen even in high peak climbing. In the sixteenth century people began to wear smoked glasses to protect their eyes from the glare of sun and snow and to use axes for chipping steps in the ice.

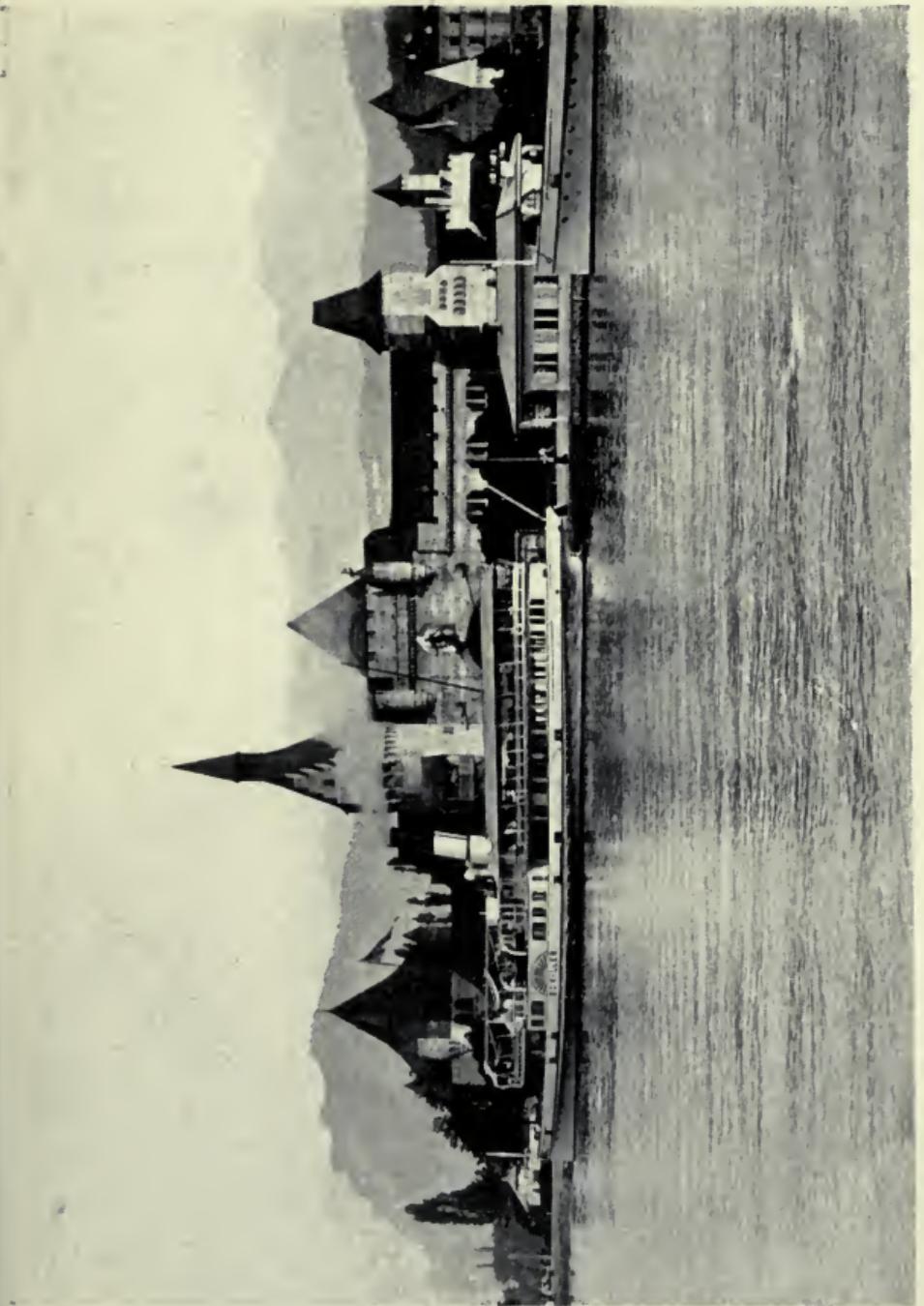
Already in the fifteenth century men had begun to dream of the heights above them, and when in 1492 a certain Antoine de Ville wanted to achieve the difficult feat of getting to the top of Mount Aiguille in the Dauphiné Alps, for no other reason than to please his King—a good enough reason in those days of chivalry—he took about eight men with him. Perhaps these were strictly speaking not true guides, but they placed ladders at the difficult spots, and put up a hut at the top. Naturally also they erected

crosses and held a service up there too. But up to within the last century the ordinary peasants have been afraid of the mountains, and so the men usually acting as guides have been chamois hunters, foresters, or shepherds, whose natural work took them higher up into the regions feared by others. There were stories and legends about some of the peaks which kept men away; in the turreted castles of the Matterhorn dwelt demons and the spirits of the lost, so that the early professional guides were not bold and fearless. Whymper described them in his early climbing days as pointers-out of paths, large consumers of meat and drink, with faces expressing "malice, pride, envy, hatred, and roguery of every description." When he had made his preliminary reconnaissance of the Matterhorn two of his guides deserted him and went off with their recently-acquired knowledge, to help an Italian steal a march on Whymper, and make the ascent first. But when Whymper learned that they had taken a whole mule-load of provisions with them he ceased to worry about the Italian rivals, for he knew that they would do no work till they had eaten everything up. When at last the English party reached the summit the Italians were only 1,200 feet below. To make them see him Whymper hurled some stones down, but the men fled back to their village saying, "The old tradi-

tions are true—there are spirits on the top of the Matterhorn. We saw them ourselves — they hurled stones at us.”

But the guides of to-day are very different and many a tale of unselfishness, endurance, and heroism can be set to their names. The years have sped by fast enough for sons and even grandsons to have followed in their fathers' footsteps, so that there are now whole families in some villages where guiding has become the traditional occupation. In fact in some places the guides are so able to keep the work in the hands of themselves and their families that it is a difficult matter for an outsider—certificate and all—to work his way into the hallowed circle; and many a man who has later become famous as a guide had to be content to do porter's work for many a season at first.

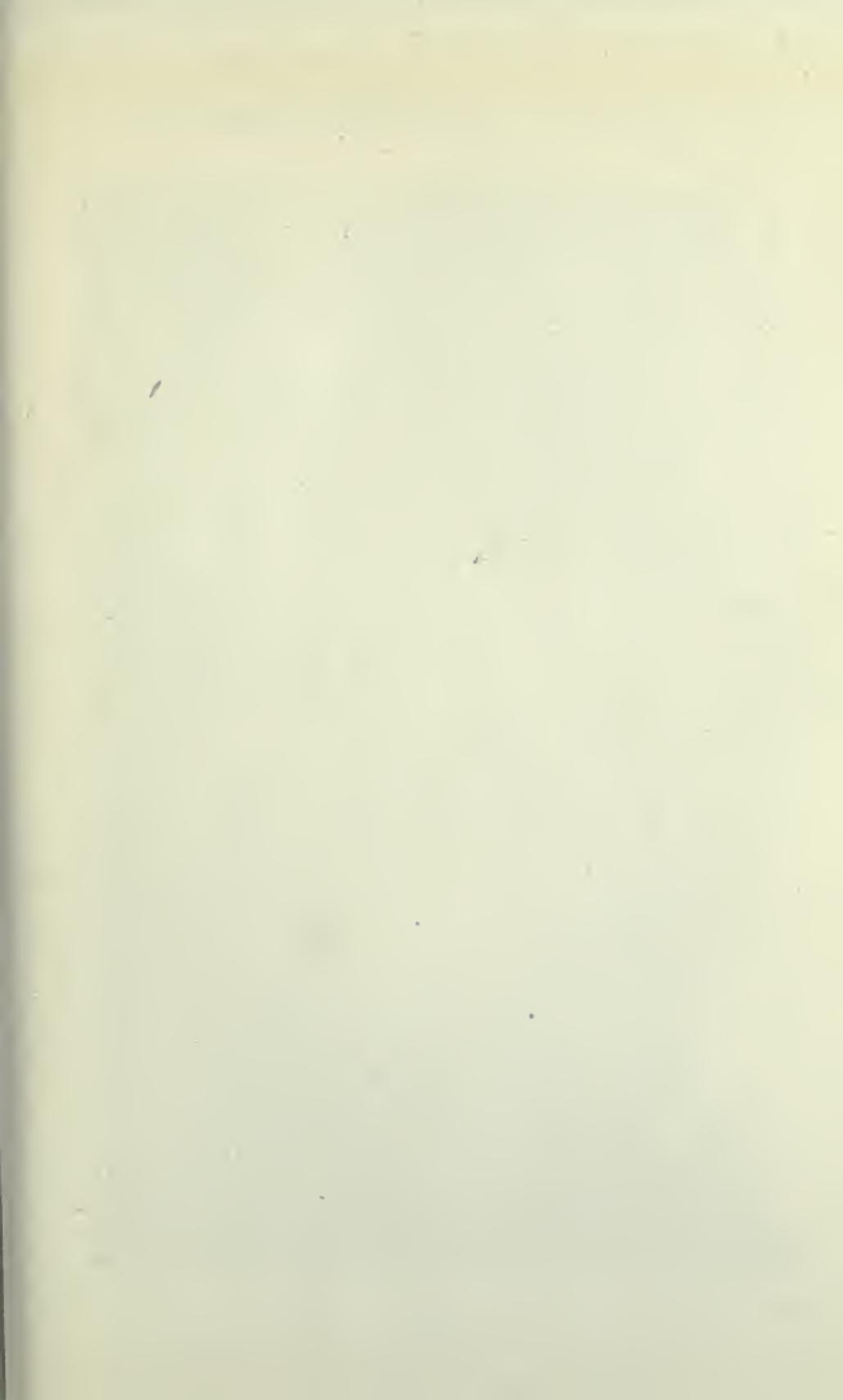
The children of any mountain village have a splendid preparation for the work of guiding. Every winter the snow comes, and they learn to know by instinct how to treat it in different conditions—when it is hard and crisp, when soft and sticky. They go to or return from school on their little toboggans, using them for hours of rollicking enjoyment on the slopes afterwards. They acquire a knack of balancing, learn to adjust arms and legs and body to the requirements of the uneven paths, and above all have to be sharp of



eye and alert of brain if they are to avoid burying themselves in the soft snow on either side. The same training is deepened when the boy in his early teens goes up to fetch wood from the forest Alps. The trees to be felled have been marked in early autumn by the communal forester, so that each member of the commune knows his share. In the winter the trees are brought down whole, or chopped up and brought down in big logs on a sledge. To guide a wood-sledge is no light task. It is very heavy, and the "driver" sits in the front or walks with his hands on the two handles. Its velocity has to be controlled, chiefly by means of the "driver's" legs, and if it goes too fast he runs the risk of a broken leg, or even of being crushed to death. So the boy who can safely bring his wood-sledge down a jerky snow-path must have a cool head and considerable presence of mind—qualities necessary above all to any man who may elect to be a guide when he is twenty years old. He makes early acquaintance with the mountains, not of the peaks and glaciers, but of the "Alps," as the Swiss call the high, grassy shoulders, which provide such excellent grazing ground, for he takes up the cattle in the spring, and helps to bring them down in the autumn, adding his high-pitched *jödel* to the cling of the cow-bells when they troop in herds to their valley quarters.

Of course even when a man is a guide he is not that and nothing more ; there are the months of late autumn, winter and early spring to be accounted for. He may be a wood-carver if he lives in the Oberland, especially near Meiringen, or a cheese-maker in Gruyère ; he has his piece of land to cultivate ; he may go out as a forester ; he may be a carpenter, or he may be hired as an hotel servant. Some who live in valleys with a winter season throw themselves into winter sports, learn English or Continental skating and teach it to visitors ; others become expert skiers, and pioneer parties over passes and mountain slopes, where as much nerve and skill are needed as on the summer heights.

It would seem that many guides after passing the prime of life take to keeping hotels in climbing centres, where they are sure of their previous employers as patrons, and where over pipe and Lager they can fight all their battles over again.





THE OBER ALETSCHE GLACIER. Page 53.

CHAPTER VII

MOUNTAIN HUTS

IF you have never climbed you are apt to regard the guides as among life's idlers, and climbers as a poor lot. They are annoying too. They will get up at unearthly hours and clatter about in mountain hotels, making the wooden floors of the hotel resound to every step, so that sleep is impossible in the small hours till they have gone.

Perhaps you are a good walker yourself and have been say, up the Faulhorn or over the Tête Noir or Great Scheidegg. You have been above the timber line and have crossed a glacier or two, but above the snowline you have not stepped. In fact those who do go seem to you to be foolhardy (if not actually fools), risking life and limb for what?

Nevertheless, the talk of the climbers is full of interest. They will point out to you that the little jagged bit of rock opposite which looks as though it could be knocked off with a croquet mallet, is really quite a respectable peak, and takes an hour or more to climb from the top of the

little white thread which you see, and which is really a snow couloir. Certainly the description of aiguilles and domes and snowfields does sound interesting, so that curiosity prompts you to think you will cross the snowline and climb one peak—just one and that an easy one. Then you will know what a couloir is, will scramble along an arête or, if it looks too fearsome, you will go up to it and see what it is like. You will traverse a snowfield, will see a cornice, and will gaze into the fairy palaces of wondrous crevasses; but as for an ice wall and step cutting, nothing shall induce you to attempt it.

From the moment when you have agreed to cross the snowline you are lost; you too have joined the ranks of the "fools."

Each hotel has certain guides attached to it, or a common list is kept in the village. Some villages try and insist that the guides shall be taken in order, but fortunately this cannot really be enforced, as few people care to entrust their lives to an incompetent guide, however much they may believe in equality as a political faith. So you generally find out from your friends a really good guide. You are a little anxious about the wisdom of the whole proceeding so you insist that there shall be no doubt about his fitness, whatever his price. Why hesitate about an extra twenty francs when your executors may be the

only people whom it will trouble? You are inclined to take a very serious view of the expedition.

So you send for the guide selected. He will probably be called Christian. On several occasions when I have had two guides both have been called Christian. You put the matter to him—you and a friend are anxious to climb a peak to see what it is like. Can he suggest an easy one? He suggests several. At one point he says, "why not traverse the Strahlegghorn?" But the word "traverse" brings up a vision of hand-climbing along a tiny ridge, your feet hanging over infinity below, and that suggestion is at once quashed. Finally a peak is selected and you make careful inquiries about its difficulties; unless it is very easy indeed you are sure you cannot do it. Christian has learnt the art of flattery. "Mademoiselle," he says bowing—"in fact, both Mademoiselles—will go up splendidly quite like chamois, he is perfectly sure of it—he can see at once." Flattery restores confidence, but I must own that the only time I ever felt like a chamois was on an arête near the Dossen hut, and then the resemblance began and ended with the number of points of support—I insisted on going on all fours!

The choice of the second guide you leave to the leader, and begin to arrange details. The nails

in your boots must be fresh and sharp ; you get a plain and sturdy alpenstock with no carved chamois at the top or other ornament, but a weapon for use. After the first climb the alpenstock is discarded for an ice axe. A tube of lanoline and a pair of smoked spectacles are added to the outfit.

The most important thing to think of is the food, and if the guides do not care for wine so much the better as it saves much weight. Bread, butter, meat fresh or tinned, dried soup tablets, sardines, boiled eggs and cheese, are the staple articles, with a packet of tea, dried or condensed milk, and perhaps some chocolate and some fruit. The guides have commodious knapsacks, which hold a vast quantity of things. There must, of course be a night at a hut, so toilet necessaries will consist of a comb, a toothbrush, a tiny piece of soap, and a small towel—nothing more.

Most of the huts are four to five hours' walk for anyone in good condition, but it may be advisable to spend a longer time over this journey in order to avoid undue fatigue before the next day. So you may start even before noon.

The Swiss Alpine Club has erected huts in convenient positions for the ascent of all the mountain peaks, and the communes have also provided a few. These are to give shelter and rest not only to members of the club, but to all climbers.

Some of them, like the Doldenhorn Hut above Kandersteg, are reached by an easy but of course up-hill walk ; others, like the Schwartzegg Hut on the Mettenberg, take some (though very little) climbing.

Some are reached after a long glacier walk, like the Concordia up the Aletsch, or the Mutthorn up the Tschingel Glacier ; and some are at the end of an interminable moraine, like the Hothürli above the Oeschinen Valley.

The walk from the Eiggishorn Hotel to the Concordia is one of the most beautiful that can be thought of ; but nearly every club hut is worth a visit for the sake of the varied walk or climb up to it. One is tempted to wish that the moraines were not quite so long, for the tramp up them is very toilsome and hot—big boulders here, loose stones there, and then a long ridge of compressed dust shelving down to the glacier below. One may have hours of it, and in fact generally does if one starts from the cultivated valley at a height of about 4,000 feet.

Few hut-climbs can surpass that from Grindelwald to the Schwarzegg. First comes the short stroll along the luxuriant valley, with all its fields blue, pink, and yellow with summer flowers ; then the way leads across the little bridge, where a poor captured marmot will be certain to be shown to you crouching in its little wooden box ; uphill

then by zigzag paths through the woods and fields till the trees become scarce and the road clings to the mountain side. Soon again the timber line is passed and the Bäregg Inn comes into view.

The way the Swiss perch their inns on every spot to which tourists can be attracted is really wonderful. Mules on good paths, porters on bad ones, carry up meat and drink for the daily visitors.

There are bound to be goats around every mountain inn. Sometimes they are friendly and will eat anything you offer them, even your little bill; at other times they will argue about right of way on a particularly awkward corner of a narrow path.

The Bäregg commands a magnificent view of the Lower Grindelwald Glacier above which it stands. The Eiger towers above it on the other side, and the foaming Lütschine leaps through the woods below with the village of Grindelwald smiling down on it.

A descent of many long ladders brings you on to the glacier itself where it is fairly level and therefore uncrevassed, but to reach the hut you have to turn to the left and thread your way amongst the moraine boulders. Here grow great clumps of tall blue monkshood, yellow ball flowers, and the little pink rhododendron called the

alpenrose. High up on the rocks above in a patch of thin turf will be a clump of the beautiful white velvet edelweiss, but you will have to climb up to get it, and probably have to carry it a little way in your mouth for want of a third hand.

On the rocks beyond there is no path, and iron pegs have been driven in to give support to hands and feet. You mount from peg to peg, till on looking back you wonder how you could have got up.

There is a simple climb in the Rhone Valley, where the iron pegs were so conveniently placed that people began to go up without guides. As soon as that was discovered it happened that some of the pegs disappeared. This left long gaps so that tourists did not venture to attempt them alone, and once more custom returned to the guides.

From the Schwarzegg Hut itself there is to be seen the most magnificent panorama in Switzerland.

There they stand, all the giants of the Oberland, raising their heads through the eternal snows. From the Finsteraarhorn rearing itself with a precipitous front at the end of the range, peak follows peak till the white cowl of the Mönch is seen beyond the shoulder of the Eiger. Only the Jungfrau is missing in her maiden glory.

The names of these Oberland peaks are all picturesque—the Maiden, the Monk, and the Ogre—what a wonderful trio they are!

The Schreckhorn just behind merits its name—the “Peak of Fear”—when that long climb up the last arête is remembered, jagged and awesome as it is. But it cannot be seen from the hut, neither can the Wetterhorn whose name is so suggestive of the storms and lightning which so often descend upon it.

The different huts have many points in common, although they differ considerably in size. They are of course built of wood, with a stout door and small windows, which will indeed open, but which are barricaded outside by strong shutters when the hut is left empty. Some wooden tables, forms, and a stove, occupy the centre of the floor, while round three sides there is a wooden bench about 7 feet wide covered with straw. On a shelf at the back will be seen an array of pairs of enormous boots; they are somewhat like wooden clogs, are lined with felt, and are calculated to hold the largest foot ever known to climb. One of the first things to be done on arriving at a hut is to take off one's own boots which are invariably wet, and put on a pair of these receptacles. It is a little difficult to keep them on but they are very welcome all the same.

From a piece of stout rope across the hut



depend a large number of blankets. These form one's covering for the night, frequently also for the evening when it may be a relief to take off a wet skirt. On a fine evening everyone will sit outside on a form, and look like comic editions of Roman Senators, with striped togas and the letters S.A.C. (Swiss Alpine Club) coming as an ornament, generally in the middle of the back.

There is a little touch of human nature which I have noticed with regard to Christian and the blankets. When we are early arrivals he says, "Now ladies, I find you the best blankets," and he proceeds to spread over the straw enough to keep out the most fearsome cold—he may even fold up some to make a pillow: he is an individualist. But when we are late and many people are there before us he becomes a communist, and remarks as his quick eyes view the assembly from a long way off: "It is a rule of the Swiss Alpine Club that everybody shares equally."

It must be admitted that a feeling of good fellowship generally does prevail at the huts, and most visitors will willingly share what they have with those who have less. Often on entering tired at a hut a cup of hot tea has been offered to me, so that I should not have to wait thirsty till the guide had got things ready.

The first arrival always lights the stove, and the

fire is kept up with the wood with which the place is stored. This is brought up regularly, but once at the Mutthorn Hut the porter responsible for replenishing the stock was delayed and there was none. The guides therefore chopped up one of the ladders for fuel, and when next day we met the tardy porter coming up from Lauterbrunnen, the remarks in patois to which our guide treated him were rapid and forcible, but hardly I believe complimentary.

Cooking utensils and enamelled iron crockery are produced from a cupboard, and certainly the stove does its work promptly. Soup is a great stand-by and always seems opportune. Even if one is at the hut for "afternoon tea" soup is certain to be produced as a first course, for the guides all seem very good at the art of making it.

If one happens to be snowed up for a day or two one has to calculate out rations, but as a rule one takes plenty of food—in fact, it is necessary for supplying the energy used up by physical exertion.

In the evening the guides will often cluster round one of the tables and talk in undulating patois. I remember I was resting on the straw one evening while everyone else was outside, and the dimness of the hut was relieved by a couple of burning candles stuck into the necks of two bottles. The guides were talking seriously, and



THE TOP OF THE FINSTERAARJOCH. *Page 68.*

as each man joined in he leaned forward into the light, and the others remained dimly silhouetted against the sky beyond the open door. An odd word here and there enabled me to understand that they were discussing a recent accident in which several tourists and their guides were killed. What was to be done for the families of the unfortunate guides? One's ears are quickened in the dark, and I at last made out the mountain where the tragedy had occurred. It was the Strahlegghorn.

We were going up the Strahlegghorn the next morning!

It must be admitted that the night is very uncomfortable. If you can get a place near a window you may manage by stealth to open it when all is quiet, otherwise the air will become terrible; the straw, even when covered by a blanket, is not comfortable, and the almost certain absence of anything in the nature of a pillow makes it very hard to rest. Often your feet are wet and you shiver. At about one o'clock or so some of the guides will arise and go out to examine the weather, for some will have to be off at 2 a.m. I must say that at this time my enthusiasm is at its very lowest. I have no ambition to climb any peak: I almost hope that the guides will come in and say the weather is bad; then I need not trouble to get up at any horrible small hour, or

go up a peak either. All I need do is to get up peacefully later on, and go back to civilization and the valley through the rain.

Some—but very few—of the huts are provided with an attendant, but this is a doubtful advantage. With no attendant everyone washes up everything he uses, folds up his blankets, and helps to sweep the floor, while it is the duty of the last one who leaves to see that everything is clean and orderly. But whenever an attendant is provided people leave all their washing-up to him, and as that is usually more than he can do, everything, especially the floor, becomes horrid.

At the Monte Rosa Hut there were two girls who not only looked after the place, but sold and cooked provisions. The state of that hut when it was crowded to overflowing on an August evening was indescribable.

Sometimes a venturesome hotel-proprietor puts up a branch establishment near one of the huts. There is the Gleckstein overlooking the upper Grindelwald Glacier, and the Concordia up the Aletsch. This is luxury: you have real beds to sleep in, and as cooking, feeding, and sleeping take place in different rooms, everything can be and is, kept spotless. It is true that one cannot get fresh rolls for breakfast, but the dinner that is served to you in the evening at a height of

8,000 feet would shame the production of many a country inn at home.

Everyone who loves Switzerland and its mountains should make at least one visit to a hut. It will be a day's excursion well worth remembering. An early start takes you up to the snows while the village below is steaming in the heat of a noon-day sun. Lunch can be enjoyed in a clean and tidy hut (for you will arrive long before the climbers return)—or better still, outside. You can boil your water and make your tea, and put a franc into the box for the wood you use. Why you should carefully wrap the franc in paper and write your name on it I do not know, but that is the custom. Perhaps the names on the papers are compared with the names in the visitors' book which is carefully preserved in a tin box, and in which everyone is supposed to write. The visitors' book is interesting reading, for there you will find many famous names—here a great statesman, there a man of letters, there again a pillar of the Church.

At a casual visit too one can take careful readings of the barometer and thermometer, and in fact make an entry of various observations on the weather with the time when they were made. Perhaps some day someone may plot these observations into a curve and deduce from them the laws of mountain weather.

There will be no dearth of crockery though you will have to eat your rolls and butter from a soup-plate, for *all* the plates are soup-plates and made of enamelled iron. There is no teapot, but the tea tastes just as well from a jug (also of enamelled iron), and the little strainer of such general use in Switzerland, will keep the tea leaves out of each mug; there are no cups and saucers. A visit to a hut and back in a day is a delight. It also benefits the hut, for it gives it a chance of being opened and well ventilated during the sunniest hours. But to sleep in a hut out of curiosity when one is not going to climb is bad form. It deprives real climbers of the blankets, space and rest which they need so much before the morrow dawns.



ICE-FALL AND SÉRACS ON THE LOWER GRINDELWALD
GLACIER. *Page 70.*

CHAPTER VIII

ABOVE THE SNOWLINE

IF you pass a night at a hut bent on spending the next day amongst the mountains, you will have to be up and off before it is light. The hour at which you leave depends on the peak to be conquered or pass to be crossed, but it is always early. There is always snow to be crossed, and that must be done before the sun is hot enough to soften its surface. New-fallen snow is of course always soft, but when it has been melted by day and refrozen by night for several days it becomes hard enough to support one on its surface provided that the slope is not too great; but when once it is softened one's feet sink in so far that the work is doubled.

Breakfast at 2 or 3 a.m. is not uncommon, and as soon as one party sets to work various shadowy lumps in the distant straw shake themselves into being and join the silent throng. You might easily have a worse breakfast than one of cocoa, sardines, egg and bread, and it is thoroughly sustaining. It is a most curious thing that you

do not feel horribly dirty after such an uncomfortable night, but by good fortune you do not. However, it is pleasant to have a little hot water for a cursory wash; but when wood is scarce and water is only got by melting the snow the wash has sometimes to be omitted. Clearing up after breakfast is quick work; then the knapsacks are stocked with food for the day, the rope carefully coiled goes over the shoulder of the leading guide, the lanterns are lighted, we grip our ice axes, and start off in single file.

There is plenty of interest to be got out of a climb from the Schwarzegg Hut to the Finsteraarjoch, one of the snow passes leading from Grindelwald to the Grimsel, as I discovered a year or two ago. The start is downhill towards the glacier, but the descending part does not last long and we are soon crossing the lower slope of the tributary Schreckhorn Glacier with its dangerous séracs guarding, in the dim twilight, some giant's castle high on the left. We have a slippery path across the icy slope for the guide does not waste time by cutting more than mere indications of steps on a place which is not really dangerous. All the same a slip feels rather uncanny when you don't know when you will stop. We avoid the main glacier and its yawning crevasses as much as possible, by keeping to the left and scrambling up over spurs of the Strahlegg-horn. Snowfields come every now and then as



THE MÄRJELEN SEE. *Page 72.*

restful alternatives to the hard rocks. Soon the rope is brought into use, and we are tied to each other at distances of about 15 feet. Whymper, great climber as he was, always insisted on the rope being used, but relates how the guides used to dislike it, either from over-confidence in their power always to detect danger or from fear of ridicule from the others; when once however a guide had slipped through the snow-bridge over a hidden crevasse and been hauled up by the pull of his comrades, he was converted and made no further demur.

Now the rope is attached as a matter of course, for the snowfields with their crisp surfaces begin to show signs of crevasses further below us, and it will not be very long before the surface begins to soften, for the morning twilight is nearing day (our lanterns were extinguished and left behind some time ago). Already the range of monsters on the other side of the glacier is beginning to alter its aspect; black gloomy rocks and greyish patches are getting lighter under a pinkish sky. The pink changes to pale blue, and suddenly the Finisteraarhorn, eastern outpost of the range, gets a first salute from the sun and sends us a quick message from its snowy peak that day has come; the gleam runs along the arête—the thin steep-sided ridge of rock to the right—along the overhanging snow cornice of the Agassizhorn, till the

Viescherhorn and Mönch take up the signal, prepared to flash it on to the valley beyond.

Fortunately we are out of the reach of the sun for some hours, so we can watch its glory on the snow over the way without having to struggle upwards in its rays.

Every time we change from glacier to rock or from rock to ice we have to cross a sort of bergschrund, where the hot rock has melted the snow and left a yawning gap. Our safety lies in the adhesive power of the snow that is left, for we have to go slowly along a cornice and down its side with a jump at the end. The guide tests it so carefully with his ice axe and cuts away the thin parts so effectively that we do not think of danger.

We have no such adventure as that described by Whymper in his "Scrambles amongst the Alps," when he was coming down to a bergschrund over the Col de Pilette in the Dauphiné in a dense mist. The clouds suddenly rolled away when they were descending a slope of 54 degrees, and they saw beyond them a huge split in the ice. To negotiate this meant a leap forwards of 7 to 8 feet and downwards of 15 feet on to a narrow ridge of ice. If you went too far you would roll down, if you jumped short there was the crevasse to receive you. The leading guide jumped fair and square, then followed Whymper and his friend. A French member of the party, rather heavily laden

with food of a substantial kind, was next in turn, but he only came to the edge and made declarations. He wrung his hands: "Oh! what a *diable* of a place!" The others encouraged him to jump, but he only turned round, as far as one can do such a thing in an ice step, and covered his face with his hands ejaculating: "No! no! no! it is not possible."

But he seems to have been helped by a strategic movement in the rear engineered by Mr. Moore. For Whympers says: "We saw a toe—it seemed to belong to Moore—we saw Reynard a flying body, coming down as if taking a header into water, with arms and legs all abroad, his leg of mutton flying in the air, his baton escaped from his grasp; and then we heard a thud as if a bundle of carpets had been pitched out of a window. When set upon his feet, he was a sorry spectacle; his head was a great snowball; brandy was trickling out of one side of the knapsack, chartreuse out of the other—we bemoaned its loss, but we roared with laughter." Perhaps it was a memory of this which made M. Reynard remark later as they descended on to the level part of the glacier and attacked his leg of mutton, that they had come down as quickly as though there had been no mist!

A little further on we have to circumvent a battalion of séracs, unmelted pillars of ice in all

their fantastic shapes, and then we reach an ice-wall. It is so steep that it appears to be vertical ; so there are real steps to be cut, handholds as well as footholds, and we have to exercise care and caution. While Christian cuts steps and moves up we hold fast and keep still ; when he has made himself firm so that he could hold us if we slipped, we move ; but we don't slip, and before long we are up the wall, over the snow, and at the top of the pass—a huge snowfield gently sloping down toward Grindelwald in one direction, towards the Grimsel in another.

The dazzling beauty of the scene is beyond description ; nothing like it can be seen from the valley ; it is an experience gained only after toil. But it is worth all the toil and labour and discomfort, the sleepless night, and the parched throat. Here indeed do we get a glimpse of the “region not for men, but for fairies . . . the rose-clad tops of the mountains where dance the spirits of the dawn.”



A SEA OF CREVASSES : BLÜMLISALP GLACIER. Page 69.

CHAPTER IX

CONCERNING GLACIERS

THIS is, as it were, a great snow-lake feeding two wide rivers of ice. The snow is very deep, and the weight of the top layers has pressed the part below into solid ice, which glides imperceptibly down on its rocky bed.

Tyndall was the man who examined the habits and customs of glaciers, and found out how they moved. One of his experiments was to put a row of stakes in a straight line across the glacier from side to side. He tried this on the Aletsch Glacier, upon which he looked from the Bel Alp, and the behaviour of the stakes showed that the middle part of the glacier moved forward faster than the sides. The ice therefore which starts as one compact mass becomes terrifically strained, the middle stretching forward, the sides holding back, the obvious result being that it is torn asunder and crevasses appear. When the ice has to descend over a steep and irregular bed it suffers still more strain, and this again causes the formation of crevasses. Usually the strains are such that the

cracks run in a direction across the glacier, but sometimes the tearing force causes them to lie along it.

Sometimes one is on or near a glacier when a new crevasse is being formed, and its advent is announced by a loud and startling report. It is not safe to linger in a region where this splitting of the ice is frequent, for a position on the edge of a newly-formed chasm would be a perilous one. Séracs are always formed where the ice appears as a tumbling cascade descending over a steep bed. The beauty of a cascade of water is known to all, that of an ice-fall to few, and the séracs stand up as big blocks of irregular shape, somewhat suggestive to the Chamounix peasants of the shape of their cheeses when the curds have been confined in rectangular forms. These cheeses are known as séracs, and so the name has been generally applied to the ice pinnacles on a glacier fall.

When an ice-fall occurs high up on the glacier in that part which is sometimes known as the *névé*, before all the snow has been pressed into clear ice, it is of fascinating beauty. Newly fallen snow covers the jagged forms in beautiful rounded curves, and a fringe of long gleaming icicles hangs down into the crevasses from the overhanging snow. Lower down the glacier the surface snow is melted and the rounded curves are lost; the séracs of the ice-

fall stand up blue and gleaming; the crevasses show clear, sharp edges. It is in this lower region (still far above the inhabited valley) that all the varied features and quaint forms which glaciers suggest are to be found. It is a region not of stillness, like the snowfield above, but of music—the sound of running water. All over the surface are myriads of little streams dancing to meet each other, and running on to join some larger one, until here and there they form real rivers flowing in a smooth blue bed. But the little streams all have a sudden end, and leave the sunlight for hidden darkness. Some stone caught in a corner is twisted round and round by the running water, and works a basin in the plastic ice; the water falling into the basin swirls round and round with the stone, and the basin becomes a deep hollow; the depth increases, and at last an icy tube is bored through to the rock beneath. Down these “Gletscher Mühle,” or pot-holes, the streams tumble and go to join the growing river which runs underneath every glacier, till the water at last reaches the snout, and emerges into light and the valley. The surface of the glacier is studded with these ice potholes, and the falling stream changes its note from a bright treble to a rich bass as it disappears. The stones which leave the holes in the ice sometimes lodge in the rocks underneath, and driven by the water’s force grind

a basin in the hard bed ; the basin grows imperceptibly, but thousands of years afterwards, when the glacier no longer exists, these smoothed-out hollows remain to tell of ancient paths. Splendid examples of these potholes can be seen in the Glacier Garden at Lucerne, and in the Belvedere Garden on the Maloja Pass, many of them still retaining the smooth rounded stone whose ceaseless movement carved the hollow, and some of them measuring 30 feet in depth.

Some glaciers abound in little clear pools of water which rest on the surface in their blue basins. These are rarer in the Oberland than in the Rhone Valley, where emerald blue lakes with their pure and spotless white margins, are among the glories of the Gorner Glacier and its rivals.

The Märjelen See is one of these glacier lakes, but instead of being on the surface of the Great Aletsch, is by its side, and therefore bounded by the mountain rocks. Every now and then masses of ice break away from the glacier and float as miniature icebergs on the surface of the water, exhibiting gorgeous colour effects. Unfortunately the lake has sometimes swollen too much in the spring and burst its way with damaging fury to the pastures near by ; so it was taken in hand and partly drained, being thereby somewhat reduced in size and beauty.

A glacier often wakes up on a summer's morn-



THE MEDIAL MORaine ON THE UNTERAAR GLACIER. *Page 74.*

ing with its surface frozen during the cold night, but no sooner does the sun begin to send down its rays than this frozen skin breaks up with rustling noise into numbers of refracting crystals washed by myriads of fairy streams ; everywhere tiny patches of ice give a thin covering to globules of water, which swaying underneath, give to the whole surface a marvellous impression of movement, change, and colour.

The frost of the night has done something else. Water from the melted snow, which has trickled during the hot day into the crevices in the rocks, has frozen with expansive force. The bits of rock thus shattered are held by the ice till the sun's heat once more turns ice to water, and they then fall down on to the sides of the glacier. Every night and every day the story is repeated, and so the fringe of stones and rocks along the sides mounts higher and higher, making a moraine 50 feet or more in height, which travels on its sliding base till it is shot into the general rubbish heap called the "terminal moraine" at the glacier's snout.

When two glaciers meet the right side of one joins on to the left side of the other, and the two lateral moraines unite into a medial moraine down the combined river of ice.

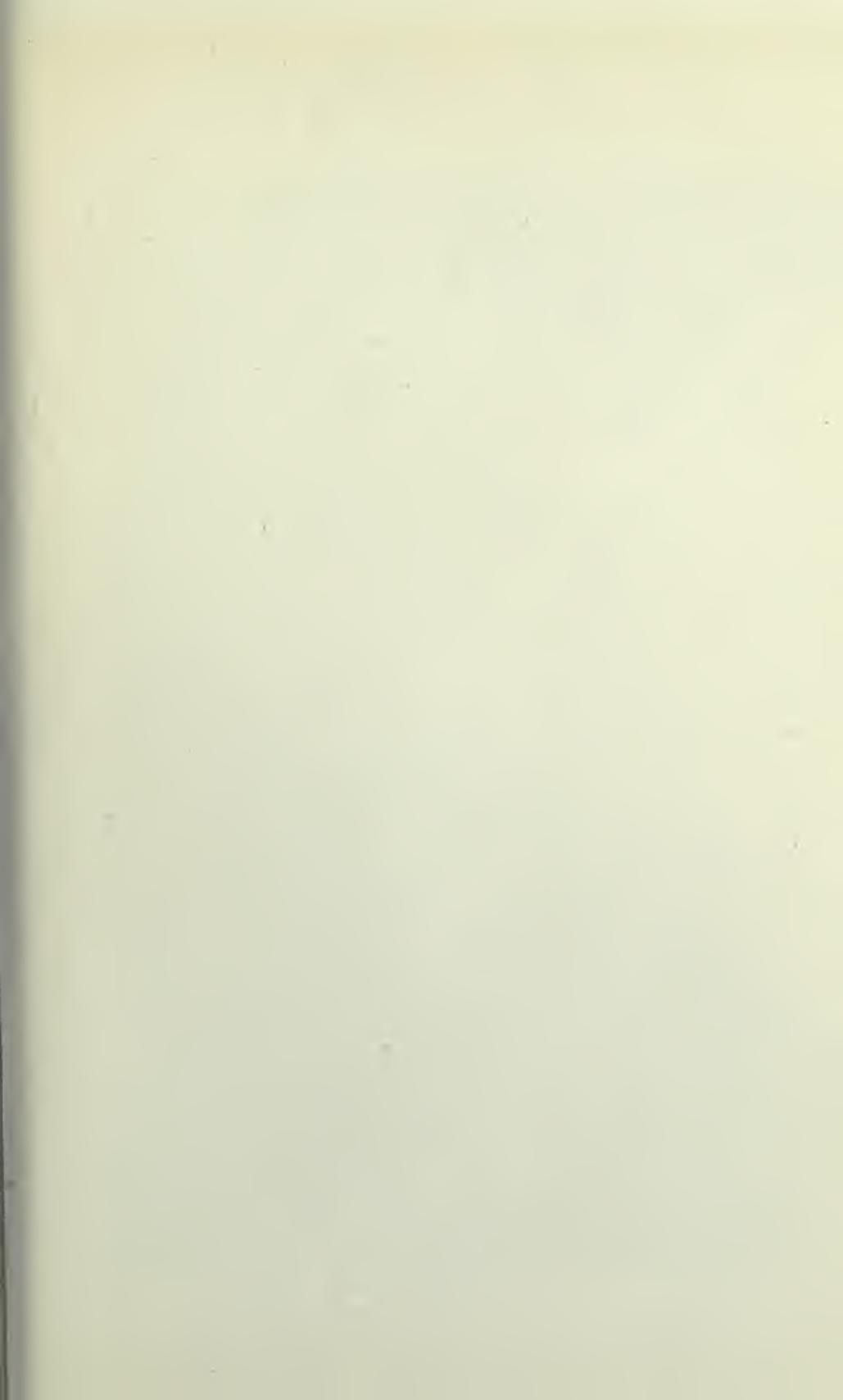
Viewed from a distance, these medial moraines look like a number of tram lines, their distances

apart remaining the same of course, and giving an impression of even regularity.

The finest medial moraine to be found in Switzerland is on the Unteraar Glacier, which begins to form where the Lauteraar and Finsteraar Glaciers swing round the foot of the Abschwung, that rock-arête which forms the end buttress of the Schreckhorn range.

It was at the foot of this arête that the Swiss naturalist Hugi put up a hut in which several eminent men made important scientific observations. Among these savants was a certain one named Stengel, who carved his name on a fragment of rock. The hut disappeared, but the fragment of rock pursued its slow travels on the medial moraine, and in 1884, about forty years after it was engraved near the Abschwung, it was discovered 2,650 yards lower down, opposite the Pavilion Dollfus, another little hut put up as a shelter for scientific observers, but now used as a club hut. This tells us that the Unteraar Glacier has been flowing at the rate of 66 yards a year, or rather less than 4 feet a week, but different glaciers flow at different rates.

Through its ten miles of length—it is second only to the Great Aletsch, which with its sixteen and a half miles, is the longest glacier in the Alps—the Unteraar Glacier exhibits other interesting lectures besides the immensity of its middle





SÉRACS OF THE RHONE GLACIER, FURKA PASS. Page 80.

moraine. It is strewn with glacier-tables, which are perhaps the most curious of glacier phenomena. Huge stones, supported on one or more conical pillars of ice, hover at heights above the surface, varying from a few inches to 6 or 8 feet. While the general surface of the glacier is being melted by the sun, large stones in a certain position intercept the sun's rays, and by protecting the ice behind or beneath them keep that part unmelted, till at last regular columns are left, with the protecting stones at the top, for all the world like giant sunshades. Why some glaciers supply these and others do not is a question of the direction in which the glacier runs, some being shaded by the mountains from much of the sun's direct heat.

The stones sometimes fall from their supports and leave their cones of ice; such cones are dotted about all over the Unteraar, and being of all kinds of sizes give the impression of being some quaint kind of growing fungus. They are almost black in colour, owing to the fact that a fine deposit, blown from the moraine, adheres to them as a surface covering. Why this does not equally blow away again is explained by the fact that the little stones are dark; they, therefore, absorb the sun's heat instead of reflecting it like the ice, and thus melt little cavities for themselves, into which they freeze at night. Evidence of this heat absorption can be seen all over the glacier,

where the little dark stones melt holes for themselves in the surface and sink as islands in the tiny pools they make. This effect, and the protecting power of larger stones and lumps of rock, make the surface of the glacier very irregular, even in a part where it is more or less level. Those who have never seen a glacier have sometimes the mistaken idea that it is a thing to skate upon; let any such believer put one foot upon the surface, and such an illusion will be promptly dispelled. The glaciers are sometimes used as ground for ski-ing in winter, but skates appear on them never.

On the upper snowfields glissading is a sport which combines enjoyment and progress. It can be accomplished in an upright position—at least, the start is upright. You glide down the snowy slant with your two feet together, and your ice-axe used as a brake behind. The point of the ice-axe is pressed into the snow, one hand grasps the hilt about halfway down, and the other grips the steel axe. The action resembles ski-ing, and all might go well were the surface of the snow perfectly regular, but suddenly a piece of rock or some unevenness of surface causes you to make a sudden jerk; the feet, progressing so harmoniously hitherto, pursue different paths, your centre of gravity falls suddenly lower than before; head, arms, and legs seem to forget which is which, and

when you have straightened yourself out you find you are descending head foremost.

Perhaps the sitting position has more to recommend it. Then, if three or four are roped and the back one works the brake, you can glissade down in comparative luxury, till an unexpected lump causes one of the party to swerve aside, and then again there must be a disentanglement. That is in the upper reaches of the glacier; in the snowless region just described, there is no other means of transit except walking.

CHAPTER X

THE CARVING OF SCENERY

ALTHOUGH Switzerland now possesses no glacier longer than the Aletsch, there were days when this Unteraar Glacier was but the top end of an immense ice river, extending right down to Berne, and collecting tributary glaciers from what are now Grindelwald, Lauterbrunnen, Kandersteg, and all the other Bernese valleys during its fifty-mile transit.

How this old glacial action has helped to mould the scenery of Switzerland can be well seen in descending the Unteraar and the valley beyond, when each level brings out new delights and forceful contrasts between present and past.

The present terminal moraine is a huge mass of boulders and débris—one of the largest in Switzerland—and the contributions to this great rubbish heap come from as far as the Schreckhorn, Lauteraarhorn, Finsteraarhorn, and the rest. So dominant is this terminal moraine, that it absolutely obliterates the front face, or snout, of the glacier. To see such a front face to perfection, you must



GORGE OF THE AAR. *Page 83.*

drop over the Grimsel to Gletsch, where the end of the Rhone Glacier stands up perfectly clean and blue below the grand cascade of towering séracs, while the baby Rhone emerges at its base ; or you should return to Grindelwald, where the glacier snout stretches down into the dark-walled gorge which was carved by itself in the past, and where the thunder of the Lütschine below adds to the mysterious grandeur.

The Aar has no such impressive birth. The multitude of little streams which, clear and sparkling, tumbled from the surface of the glacier down some crevasse or Gletscher Mühle, have joined together below, and emerge through the débris at all points. But they have changed on their journey, and are now charged with sediment, which makes them look thick, dirty, and grey.

The various streams pursue an indefinite path through a region of débris which is part of the old moraine, and upon which the Aar streams themselves lay down a fresh deposit each spring. This part of the bed of the Aar is over 6,000 feet up, and is snow-covered every winter, so the new spring finds the streams in new positions, giving a somewhat different appearance to the details of the landscape.

At about this height we come to the first signs of timber—a few brave little pines trying to hold their own against wind and snow. But even

before these there is pasturage, and herds of cattle may daily be seen grazing above the timber line. The closing in of the rocks forces the Aar into a narrow path, where it tears along with almost deafening noise, coming out again into a big basin, now chiefly bordered with rank and boggy grassland, but once a glacier lake, hemmed in by a rocky bar across the narrow corner. Here is the Grimsel Hospice, and the rocks high up on all sides show by their smooth rounded curves how they were worn by the huge glacier of the past. No better spot than this can be found in Switzerland to show what glacier action can accomplish. Low-lying rocks with rounded backs are the "roches moutonnées" of the school-books, and show what imagination can do in suggesting their likeness to resting sheep.

The top of the Grimsel Pass is only a short half-hour's walk away, and then there is the wonderful view over into the Rhone Valley, with the Furka road running by the very edge of the glacier séracs, from which the modern Belvedere Hotel is literally only a stone's-throw. Below runs the splendid Grimsel road, replacing the old bridle-path, and bearing the wear of hundreds of carriages every day. Over it dashes the four-horsed diligence—in fact, a cavalcade of diligences in busy times—carrying yourself and your luggage and the post between Meiringen and



LOOKING DOWN THE YOUNG RHONE VALLEY. *Page 87.*

Gletsch. This great road was only opened in 1895, and the old path can still be seen between the Hospice and the Handegg Falls, with its tiny stone bridges over the Aar. The old track swung from side to side wherever foothold was easiest to find, avoiding the great sweep of water-worn and glacier-worn granite which rose in smooth, steep walls from the river. But the smooth granite did not trouble the Swiss engineers of twenty years ago; they blasted out huge fragments and gave to their grateful successors a firm and wide security unknown before.

For those who care for the quaint details of scenery, there are plenty of pot-holes to be found in the rocks. A fine large one can be seen with a little scrambling from the bridge near the Kurz-entännlen Alp, and a scramble uphill will disclose another one large enough to contain a growing tree. All these are part of the domain—as indeed is the Schreckhorn!—of the owner of the Grimsel Hospice.

Earth pyramids are not found here, although they so often exist in the old paths of glaciers. They are, as it were, the morainic equivalent of glacier tables. In the case, however, of the earth pyramid, the capping stone has protected the part beneath against the rain instead of the sun; so, as the rest of the moraine deposit has been washed away, these protected parts

have been left until, in the course of ages, they stand up as curious pillars with a big stone at the top. They may be considered as umbrellas instead of sunshades. They are found in the Rhone Valley, some fine ones in the Val d'Herens, and a couple of examples on the way up to the Eggishorn, but not in the Oberland. The children speak of them as the "Castles of the Gnomes."

Geologically speaking the Aar is a young river, so it dashes down its way with all the racy exuberance of youth. Its path may almost be considered as one continuous cascade, with here and there a pause over some few level metres, where a check to its velocity causes it to drop some of its load of stone and sand, and build up a little beach in the bend. At the Handegg Falls it has a mighty drop of 240 feet, is joined at the same place by the Aerlenbach, and the spray from the two rises high into the air. The beauty of this fall rivals that of the Reichenbach at Meiringen.

Near the Fall the rock had to be pierced, and the road passes through a tunnel—a common enough thing in these great modern roads, as those know who have walked beside the Lake of Lucerne along the Axenstrasse, or up from Göschenen to Andermatt. Sometimes the rock is tunnelled as a protection against avalanches and sometimes the road is covered for the same reason.

Just above the Handegg Fall can be seen a fine example of the destructive work of an avalanche, where huge trunks of uprooted trees, with boulders by their side, remain to tell their story.

The whole path of small rock avalanches can be frequently seen below the Handegg, and here too the rocks are splintered and jagged by frost and rain. The little splintered bits accumulate at the base, but having no glacier to slide away with them, they spread themselves into large fans, and are in course of time overgrown with grass and flowers, among which the blue geranium can often be found. The most famous part of the course of the Aar is the gorge through which it races after leaving the hill-bound hollow in which lies Innertkirchen. Here it has cut its way through nearly a mile of granite; and that it is still carrying on this work of eternity can be seen at every corner round which it tears. On the outer curve it is undercutting the rocks, so that the base of the gorge is frequently far wider than the slit at the top; on its inner curve it piles up a beach of the rocks which fall into it, and which its incessant movement has broken and smoothed into rounded pebbles. This granite gorge cuts through the Kirchet Hill which divides this Aar Valley into the Upper and Lower Hasli-Thai. After this dramatic finish to its mountain career, the Aar settles into civilized respectability, and

between its man-made banks preserves a straight though rapid path through Meiringen to Brienz, the home of Swiss wood-carving. Here it loses its dirty grey colour and widens into the blue waters of Lake Brienz—one of the gems of the Oberland. At Interlaken it narrows again as it runs under clusters of ancient timber *châlets* dark with age, and bearing on their overhanging gables quaint proverbs and the names of their builders. These *châlets* are a great feature in the Oberland; it is the commonest thing to see on one after another some such statement as: "This was built in the year 1680 by Rudolf Baumann and Anna his wife," as though among this hardy folk the building of a cottage was a work of love and affection, and symbolized the stability and unity of family life.

On the other side of the Aar stand the immense hotels which modern fashion demands, which with the shops full of "Tourist-artikel" build up a town full of life in the summer, though dead in the winter. It extends right on to Lake Thun, giving between its gay-looking houses glimpses of the wonderful Jungfrau in the background. Lake Thun, into which the Aar once more expands, is another of the beautiful Swiss lakes, with here and there a feudal castle, here and there a village bright with flowers. The balconies with which the older Swiss *châlets* are provided are reached

by outside steps, which form the only staircase to the upper floor ; in the summer these are covered with geraniums growing in luxuriant richness.

Within the last few years a snake-like railway has coiled itself amongst the valleys and over the mountains from Spiez to Territet, and thus connected the two lakes of Geneva and Thun, adding another link between the Rhone Valley and the Oberland. The Aar leaves romance and the snow-mountains when it leaves Lake Thun ; it has later the honour of carrying Berne on its banks, and then flows off to lose itself in the waters of the Rhine.

CHAPTER XI

OTHER RIVERS

THE story of the Aar need only be rewritten with a change in the name, and we get the story of half a dozen other rivers which with their tributary streams have been, and are still, the carving-tools of Swiss scenery.

Canton Grisons sees the Rhine start from two distant glaciers on its way to Lake Constance and its famous falls of Schaffhausen, and the same canton nurses the infant Inn, from its cradle at the foot of the Maloja Pass, sheltering it through its beautiful Valley of the Engadine. Again we have the lakes which are always formed by rivers in their geological youth (the period claiming all the waters of Switzerland). The Lakes of Sils and Silvaplaner were once an open waterway, but the persistent carrying efforts of the little Fex have laid down such an extensive delta that it has pushed itself right across the water and only left a narrow channel for the waters of the Fex itself and the Inn. The same thing is being done a little lower down where the continued effort of

the Julier and Surlej brooks on opposite sides of the Silvaplana Lake are gradually building up the land and cutting off the Lake of Campfer.

This beautiful Valley of the Inn (generally known as the Engadine) with the adjoining one of Pontresina at the foot of the towering Bernina range, were long cut off from easy access by travelers from without, even though the climate and springs of St. Moritz made it famous as a health-resort as far back as the sixteenth century. There is an easy route to it over the Maloja Pass, the lowest pass (less than 6,000 feet) between Switzerland and Italy, but that is from the South. From the North and West its approach was very difficult until the Albula Railway was built. This took four and a half years to make, springs from side to side over perpendicular gorges, leaps ravines, pierces the mountains, curls itself upwards in cavernous loops, links together the Valleys of Rhine and Inn, and cost a million pounds. It is one of the marvels of mountain-railways, though since it only leads to a secluded Alpine haven, it will never be as famous as the St. Gothard and Simplon Railways, which are great international routes.

Of all the rivers in Switzerland the Rhone is, perhaps, the most famous, and is known every inch of the way from its glacier source on the Furka, till it enters Lake Lemman (the Lake of

Geneva) through its own delta at Villeneuve. Here its political position is somewhat involved, for the northern bank of the Lake with its vine-covered slopes belongs to Switzerland, while the Southern bank is in Savoy and France. The railway clock at Geneva emphasizes the proximity of the two political divisions, for it shows a double time. When the Swiss time is shewn by one hand as eight o'clock, in accordance with Central European time, another hand gives it as seven o'clock for the French or Western European time.

It is a dirty muddy-coloured Rhone that enters the Lake at Villeneuve; it is a clear Rhone of sapphire blue that leaves it at Geneva. Its flow is such that it provides electricity for the whole town, and each modest watchmaker, working alone in his little workshop, turns his lathe by some of that same electricity; the river's rate is also such, that one suspects that some of the garments which are washed so cheerfully by rows of bright looking *blanchisseuses* on its banks find their way to the sunny South of France instead of back to their owners.

The contrast between the laden mountain stream and the stream after losing its sediment in an expansive lake can be wonderfully seen if you stand on the narrow strip of land separating the almost parallel rivers of the Arve and Rhone



A GROUP OF PEASANTS IN ITALIAN SWITZERLAND. *Page 89.*

just as they meet. The waters do not mix, and as far as the eye can reach a straight line can be seen between the drab torrent from Mont Blanc and the blue, lake-cleared Rhone.

Although Canton Uri is the cradle of the Reuss in its early stages, there are four cantons to receive it when it expands into its Lake at Fluelen, and though to English people this lake is generally known as the Lake of Lucerne, yet Uri, Schwyz and Unterwalden also share in its shores. These are the "forest cantons," which already in the thirteenth century had made among themselves the bond of defensive alliance, which later formed the foundations of the modern Federation of Switzerland.

When you have descended from Mount St. Gothard, or gone through the famous, though smoky tunnel, you have deserted the Reuss and Rhone for the Ticino, and progress down its valley past Bellinzona, the old-world capital of the canton, and on to Lake Maggiore. This lake like Geneva and Constance owes divided allegiance, and though the northern part counts politically as part of the Swiss Canton Ticino, it is Italian in speech and appearance. Instead of châteaux with slanting roofs, there are white-painted houses fronted with colonnades; instead of simple little churches crowned by graceful spires, there are huge cathedral-like erections

with white campaniles, perched up above the vines, like the Madonna del Sasso at Locarno.

But if Maggiore has a dividing line across it where Switzerland and Italy meet, still more intricate is the division of Lake Lugarno, for the frontier crosses its waters three times, and as one is carried on the steamer from Tresa to Lugarno Swiss *douaniers* will inquire about your luggage. Should you the next day make excursion from Lugarno up the Lake towards Porlezza you will be leaving Switzerland for Italy, and Oria will produce its Italian officers to demand what you are carrying.

These Italian lakes are fine hunting-grounds for smugglers, especially for Italian ones. Italy puts heavy taxes on imported articles, not merely on luxuries, but also on necessaries, such as salt, sugar, and petroleum, while other things, like matches, are Government monopolies, and the people are not allowed to buy any others, although the articles are sold at ridiculously high prices. The peasants are very poor, and find it very hard to buy the barest necessaries of life. In the winter, it is said, they often have to go to bed at four o'clock because they cannot afford to buy oil for a lamp. This occurs in the Plain of Lombardy—one of the richest and most fertile plains of Europe. So it is little wonder that men who are boatmen or fishermen by day find it ex-



LAKE LUCERNE AT FLUELEN. *Page 89.*

citing and lucrative to turn smugglers by night, and many a little boat steals from a secluded creek, and swiftly crosses the watery frontier laden with untaxed necessities. A whole army of Government officials are on the watch with swift boats and searchlights, but it is found that wherever a Government imposes oppressive taxes its officials are corrupt. Those on these Swiss-Italian lakes are no exception, and a well-placed bribe has been known to affect the searchlight, so that it throws its beams in a quarter away from the laden boat.

Few greater contrasts can be found than those between one of the lakes north of the Alps, and one of those on the Italian side—between, say, the Lakes of Lucerne and Lugarno. Lucerne is bounded by steep mountains capped with snow, Lugarno by hills clothed above by walnut-trees and chestnuts. The typical Swiss villages in the North are replaced by the long arcades, such as those of Morcote, or the roadless terraces of Gandria; limes clothe the sloping hills, and rows of stately cypress-trees stand out in grave contrast to the whiteness of the walls. Above all, there are the villas and their glorious gardens, with their brilliant blaze of colour right down to the water's edge.

CHAPTER XII

PASSES

THE great Alpine range which stretches in a vast dividing sweep round the north of the Italian peninsula might well be considered to have been an unconquerable and complete barrier against invasions by the dwellers on either side. But this is far from having been the case. There are weak links in the chain; these weak links are the passes, and it is at these passes that the barrier has been broken. Any dip between two peaks can be called a pass or "col," "joch," or "saddle," but some are of course too high to be of any practical utility, they are merely the haunts of climbers. No invaders from Canton Vallais would have chosen the Lysjoch (14,033 feet high) as their point of descent to Lombardy, neither would the men of the Oberland have chosen to cross the Mönchjoch when they wished to enrich themselves at the expense of the Vallais folk.

When the men of Upper Vallais thirsted for the wines of Lombardy they crossed the passes of Monte Moro, Antrona, or the Simplon, the last of

which has now a carriage road over it and a railway beneath it. The men of Berne carried their merchandise up the Hasli Valley and over the Grimsel to the Rhone—not by the wide road which now carries tourists to Gletsch, for what cared the traders for the beauties of the Rhone Glacier?—but by a mule-path from the top to Obergestelen. Then again—undaunted by the small glacier on the top—they crossed over the Gries Pass into the Tosa Valley (the Val d'Ossola) on their way to exchange their goods for the treasures of Milan. Some German-speaking colonies at the head of the Val d'Ossola, or Val Formazza as it is there called, still remain to tell of these early efforts ; but the valley itself is no longer Swiss, although the combined efforts of many of the cantons, including those as far away as Zürich and Zug, succeeded in holding it for various periods during the fifteenth century. The men of Uri, bursting from their narrow Reuss Valley, swarmed over the St. Gothard Pass, and, with spasmodic assistance from Schwyz and Unterwalden, managed to hold the Ticino Valley (Val Levantina) and several other coveted gems, Bellinzona being the key to the pass and therefore the fortress through which Uri could pour her stalwarts as fast as required. In 1798 this part of Italy was taken from the conquering cantons and put with the Helvetic Republic, but in 1803 it became one of the

then nineteen Swiss cantons under the name of Ticino.

The St. Gothard Pass, which played such an important part in the annexive expansion of the free men of Uri, has always been the principal trade-route between Italy and the North of Switzerland, and the prosperity of the town of Lucerne has depended on its development since the opening of its earliest mule-path in 1293. It runs through two valleys only—the Reuss and Ticino—but both are precipitous, narrow, and dangerous, at least they were dangerous in those early days. The hardest task of the old path-makers was to get from Goeschenen to the Plain of Andermatt through the Schollenen defile, where the Reuss falls with such terrific force, and the only bridge that could be put up was one of wood, hanging by chains from the frowning rock a little higher than the present Devil's Bridge. It was always washed by the spray from the Fall, was never safe in storms, and frequently had to be renewed. Part of the rock began to be tunnelled early in the eighteenth century, but it was a century later that Uri and Ticino, seeing this road deserted, for the new roads over the Simplon, the Splügen and the Bernadino, combined to make the magnificent Gothard road which was finally opened in 1830, after ten years' labour.



ON LAKE LUGANO. *Page 91.*

Its position as the connecting-link of many roads is almost unrivalled. At Hospenthal it is met by the Furka route from the Rhone Valley and at Andermatt by the Oberalp Pass from the Grisons; the Süsten Pass from Meiringen and the Oberland joins it at Wasen and the Klausen Pass from Linthal in Canton Glarus at Altdorf; all these are on the northern side. On the southern side it meets the Luckmanier Pass from the Grisons along which the Benedictine monks from Dissentis used to tramp, and which the Emperors crossed on their way to Rome. The Luckmanier Pass was, in the Middle Ages, a substantial rival to the St. Gothard, especially in the number of its hospices, after two of which it is sometimes called either the Pass of St. Mary or the Pass of St. Barnabas. A road was begun from Dissentis in 1780 across this pass, but the modern one along the fine gorge was not finished till 1877, and so has never rivalled that of the St. Gothard.

The San Bernadino Pass, which, like so many of these passes, was called after a saintly pilgrim who rested there on his missionary travels, begins with the "Via Mala," a gorge just as gloomy as the Schollenen, and the handiwork of the Hinter Rhine. The weird terror with which this gorge must have inspired the people of the Middle Ages can be well understood, if you stand on the second bridge (built in 1739, 170

years ago), and look at the river 160 feet below, in a ravine so narrow, that in the floods of 1834 the water rose to the bridge. It was not without reason that the people of Canton Grisons called the water the "Rhein," which in their Romanic speech means "running water."

The San Bernadino Pass is now little used compared with the Splügen, the two having the same route as far as the village of Splügen, when the San Bernadino runs west and descends into Swiss territory, while the Splügen turns east. It takes us up to a height a little under 7,000 feet, and presents us to the Italian customs officers at the top. It is a wonderful pass, giving all the marvels of Swiss scenery on the one side, and the rich glow of Italian beauty on the other. It is not without its hint of danger, too. There are the avalanche galleries of strong masonry and there are the storm-bells rung at Monte Spluga to guide travellers through the blinding snow, for in winter the snow is so deep that the customs officers are blocked in save for their upper windows.

The collection of tolls has always been a source of delight and profit to their owners; so a pass has always been a popular possession, and its ownership eagerly contested. Perhaps the Septimer Pass was rather distinguished in the way of exacting dues of this kind. It was in the Middle Ages rather more popular than its near rivals, the

San Bernadino and Splügen, because people could reach it from Coire, the Grisons capital, without encountering the terrors of the Via Mala. It will be remembered that in those days feudal lords would find in the tolls a very fruitful source of income, particularly easy to collect on a road so well defined and so limited in extent as a pass. It was therefore to their interest to get possession of its entire length from valley to valley, and so, when the feudal lord owning sway over the Septimer Pass was the Bishop of Coire—for the addition of temporal power to their spiritual influence was seldom displeasing to the representatives of the Church—it gave him great satisfaction to reflect that travellers starting from Coire were still upon his domain as they descended to Chiavenna. If however travellers should be so misguided as to prefer the San Bernardino or the Splügen, in spite of their obvious drawbacks (which the Bishop would take good care should be widely known), then some other lord took the dues instead of the good Bishop. It was clear that the Church, and the Bishop, must not be allowed to suffer this loss if it could be prevented. In the middle of the fourteenth century an opportunity occurred of putting matters right. Good-fortune arranged that the Bishop of Coire should hold a high position under the Emperor, Charles IV.—he was, in point of fact, Chancellor. What was

more easy then, than to persuade Charles of the advantage of the Septimer Pass, and what more natural than that Charles should issue an edict prohibiting the use of any other pass but this over that region of the Alps? Then the coffers at Coire grew full, and the Bishops extended their rule. But passes change in popularity, and when early in the last century the whole group of Grisons passes were provided with carriage-roads, while the Septimer clung to its mule-track, its importance waned, and it now stands as a symbol of the past to be visited by walkers in the summer, and by skiers in the winter.

The men of Tyrol had a pass of their own to Como—the Umbrail—but as the Upper Münster Valley has been Swiss and not Tyrolese since it was sold by Austria in 1762, that pass is now the most easterly route from Switzerland to Italy, and is moreover the highest pass in Switzerland, being 8,262 feet up. The famous Stelvio Pass—the highest carriage-road in the Alps (9,055 feet high)—joins the Umbrail after it has crossed the boundary line, but the junction is in Austria, not Switzerland.

To the traveller in Switzerland itself, the best-known passes are those which cross the northern part of the great Alpine range, from the Oberland to Vallais. In point of popularity the Gemmi almost rivals the Grimsel and Furka, but it is a

pass for the strong and not for the luxurious ; there is no carriage-road over it. The excellence of its path never has been its strong point ; the horses and mules ascending from Leukerbad in the Middle Ages found the way so steep and stony, that they came to a standstill after a few hundred feet and refused to budge till half their load was removed. An almost perpendicular wall, nearly 2,000 feet up, was the finishing obstacle to the ascent, and the dangers of the path before it was improved about 1740, can be well imagined when one looks over the edge at the sudden corners of the rocky staircase winding down below. The law has interposed in recent years to protect travellers against themselves, and no one is allowed to ride on horseback down this road. In the old days even the cows used to find the track too much for them when they followed the time-honoured custom of mounting to the green "Alps" for summer pasture, and it is said that each cow had to take a guide !

The best way to take this pass is to mount by the gradual ascent from Kandersteg, and then a sudden flash to the south as you reach the top shows the mighty monarchs of the Vallaisian Alps extending from the Dom to the Dent Blanche, with Monte Rosa and the Matterhorn in the centre.

The path has always been better kept on the

Bernese side than on that of Vallais, perhaps because the Bernese had a way of making marauding descents into Vallais of which the Vallaisians forcibly disapproved—though, curiously enough, it is Canton Vallais, and not Canton Berne, which now stretches over on to the other side of the pass, the boundary between the two now being not at the summit, but on the northern side. Perhaps the Vallaisians feared the Protestant influence from Berne if they made their Gemmi path too easy, for that progressive influence was steadily reaching over by the next and easier way—the Lötschen Pass. In 1698 the Oberlanders paved their side of the Lötschen mule-track, but nothing could induce the light-hearted Vallaisians to do the same. That misguided Protestant influence, and the commercial success that, somehow, always seemed to accompany it, was marching upon them quite quickly enough, as it was. The Vallaisians always managed to keep control of their central pass to the south—the Simplon—and the Vallaisian Bishop of Sion, like his mitred brother at Coire, found the revenue very acceptable, which was gained from the way-dues on all sorts of commodities, including salt coming from Milan. The Knights Hospitallers of St. John had a hospice up there, but after the pass had been deserted by peaceful travellers in favour of the Antrona, and was only used as a means of pillaging

descents upon the Val d'Ossola, the monks left. When Napoleon began readjusting the map of Europe, he saw the value of the Simplon Pass, and in 1801 constructed the great road that leads over it. Now his barracks are disused, and once more monks are in residence at the top. They are not alone, however, in seeing to the needs of travellers—a good hotel shares with them the solitude of the broadened saddle at the summit. It is curious that none of the passes had any names for the first ten centuries or so A.D., and when armies went over them, the record of their travels leaves some room for guessing, when it came to determining the actual Alpine shoulder which they crossed. Hence, the time-honoured difficulty about Hannibal.

By the Middle Ages the passage of pilgrims to and from Rome had led to the establishment of hospices on most of them, and hence many of the passes began to be named after pious founders of the hospices or holy travellers, or after the chapels erected by the monks.

By far the most famous of these hospices is that of the Great St. Bernard, which has been served for many centuries by a colony of Austin Canons with their well-trained dogs, and has given the name of its founder to the pass, which was even before the time of the Romans, a great thoroughfare across the Western Alps.

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