



A LINE OF SAWYERS.

A HARVEST OF ICE.

BY WARD MUIR.

Photographs by the Author.

FARMERS are proverbial grumblers, and it is popularly supposed that they cease to be happy when there is nothing about which to complain. This being the case, one is tempted to wonder how the Davos folk manage to endure the even tenor of their existence in winter-time. During five or six months of the year their fields are buried beneath a metre or more of snow, as are also their vegetable-gardens—if they possess any. There can be no hardship in this, for it is an annual occurrence, and as such must be foreseen long in advance. Besides, as they well know, the very wealth of their future hay-crop lies in this thick carpet of white, its thaw fertilising the ground as no rainfall could possibly do. But the dying year brings with it another feature as regular in its appearance and as inevitable as the snow. And before the very eyes of the inhabitants of those far-off hills there arises, slowly and silently, a mighty crop made ready for the cutting by

no tilling or cultivation of the hand of man.

The valley of Davos, in Eastern Switzerland, lies at a height of 5,150 feet, or almost exactly a mile above sea-level. At one end of it is the curious town of consumptive invalids, who spend their time lying on balconies in the open air, blandly oblivious of the state of the thermometer; at the other nestles the little lake with which we have to deal. Upon its dark but placid surface the crop to which reference has been made grows each winter.

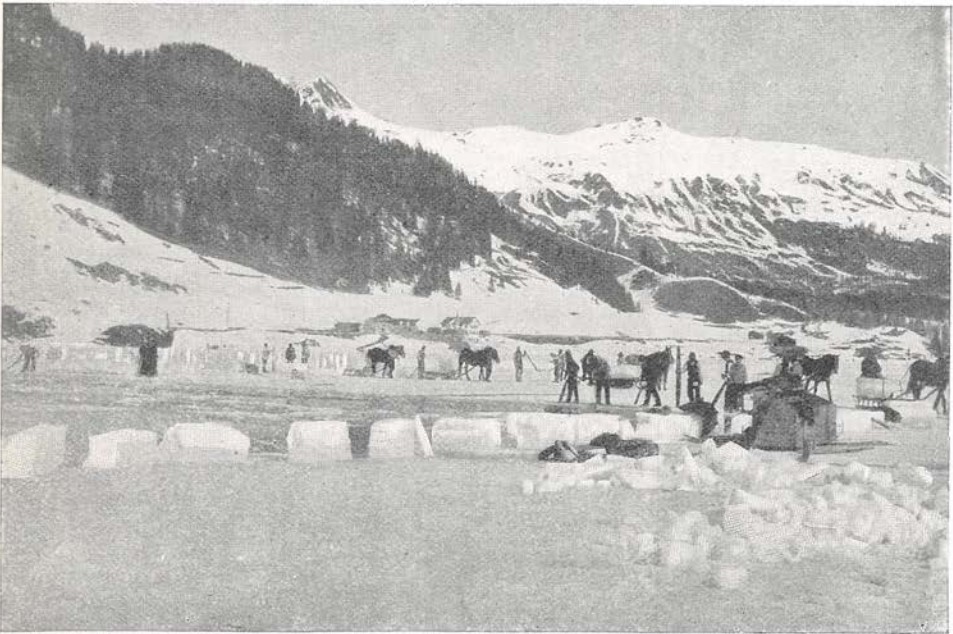
At the end of November the water begins to feel the cold. Early December sees an edging of ice, against which the wavelets, still free in the middle, break with a dull, clashing tinkle. By the close of the month skaters are skimming over the black surface, through whose transparent pane they can see the bottom far below. Then comes a snowfall and puts an end to the sport for a year to come. Underneath the drifts, how-

ever, the slow but sure work of freezing is still going on. January finds the Davoser See gay with life once more. The reapers' turn has now come. And there they are, a hundred of them at least, sweeping, sawing, dragging, carting, and storing the great white harvest. A strange harvest it is, too; for the busy labourers are garnering water, but water filled with the market-value of King Frost—water turned to ice.

Thus these unhappy farmers have nothing left at which to grumble. Their fields, it is true, are unreachable. But here is work ready to hand. Here is wealth for the mere taking of it. Here is a crop, the

broken from time to time by the weird shriek of a train threading its way amongst the pines that line the margin of the See. But behold! one day this lonely scene is filled in a moment with life and movement. The harvesters are here, a troop of men and horses calmly marching on to the brittle film which is the only thing that separates them from fearful depths below. But it is strong enough to bear an army without the least chance of cracking.

The snow is swept away from a large space and carried to one side in hand-drawn sledges so constructed that their load can easily be tilted off. This clearance takes



WINTER ON THE DAVOSER SEE.

appearance and due ripening of which is as certain as the succession of day and night itself. There is no risk about it, no possible chance of failure. At a height of a mile up in the air it would be a strange winter that could pass without its tribute of money-making cold.

The lake has usually been frozen for a month at least before a serious attack is made. Its surface presents the appearance of a white plain a mile long and perhaps half a mile broad at its widest point, traversed by a single sleigh-track and set in the midst of solemn mountains. The hotels of Davos Platz are hidden behind a spur of the hills, and the silence of the spot is only

some little time, as the coating of white is fairly thick, though in no place does it attain to as great a depth as that on land. The large expanse of the lake being exposed to the wind offers less opportunity for the formation of big drifts.

An ice-plough is now called into operation, its duty being to mark, by means of furrows scratched to the depth of a couple of inches or so, the size of the blocks to be subsequently cut. This machine, however, is not invariably used, as its value depends upon the hardness of the surface.

When a sufficiently extensive chess-board pattern has been mapped out, an auger is requisitioned. With this a hole must be



CLEARING THE SNOW.

bored at the corner of one of the squares right to the water beneath. Through the aperture a long, narrow saw is passed, and, making use of its odd handle, the workman commences to thrust it up and down until a slit is produced. From this slit branch out all the other slits that cut away the hundreds of blocks which are subsequently taken out of this mine of ice. It forms the base of operations.

The saws are mighty instruments, six feet long and armed with deeply cut teeth of varying size. They soon become very rusty, owing to the constant contact with water, but this



SAWING.



HAULING.



OFF TO THE STORE.

does not affect their utility. The men never take the trouble to clean them beyond a slight wipe at the close of the day's labour.

In the course of a few days quite a large hole is cut. The water that is revealed looks inky black in contrast to the whiteness all around. Blocks of ice float upon its surface, bobbing lazily

about with only one-third of their bulk showing above the level, until the time comes for their transference to the shore. Then suddenly their true size becomes apparent. Three sturdy workmen approach the edge of the pool, and



SLEIGHS.

each plunges the single prong of his pickaxe into the softer side of a block. Then comes a long pull and a strong pull, till the big shining mass comes dripping out of the water on to the top of the floe from which it was originally cut. It is at once dragged a distance of a few yards to where the

sleighs are being loaded, and here, for convenience sake, it is tilted upright at the end of a row of similar blocks.

But these blocks weigh a quarter of a ton apiece. How are they manipulated so easily? Simply because they are ice, and grow in a region of ice. Being ice, they float; hence are easily got at when wanted. Being ice, they slide; therefore the labour of hauling them is

small. And as this is a region of ice—with snow—their transportation to the storage-houses or railway-station is a mere affair of sufficient sledges, with horses to drag them.

Each block is about a yard long and half a yard wide, while the thickness varies from somewhat over two feet to one foot six inches,



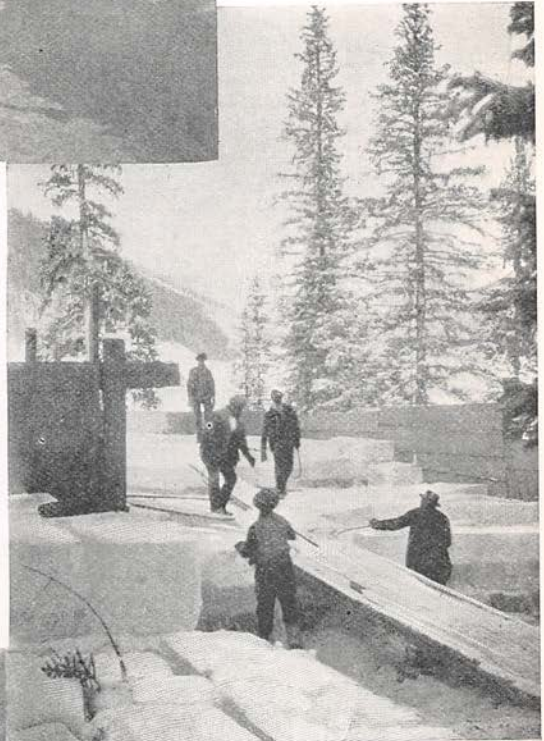
THE STORAGE.



ON THE WAY TO THE STORE.

according to the date. In March, the workmen commence to take ice from the places which have already been cut, the water having re-frozen. This latter product is thinner, but of more solid and glassy quality. Two-thirds of the thickness of the first crop is white and opaque in texture, and also softer than the clear ice underneath, which contains no air-bubbles, having been formed from water unadulterated with snowflakes, and protected by the upper crust from atmospheric influences which could cause it to become honeycombed or rotten.

Threepence would purchase one of



THE STORAGE.



FOR TRANSIT BY RAIL.

these huge blocks at the lakeside; but by the time it has been taken to the Davos Dorf railway-station, loaded into a van, and transported to Landquart—the main line junction, forty miles away—its value has increased pretty considerably. The Rhaetian Railway Co., who control the trade, charge at the rate of 60 centimes the 100 kilos

of ice (roughly 200 lb.) during the month of January, 80 centimes in February, and one franc in March. The price seems moderate enough when we think of the labour and expense involved. Anxious householders in England would be glad if they had to pay as little as this. But alas! the Davoser See is seven hundred and fifty miles from London town.

The workmen receive three shillings a day for their services, while the wages of a sleigh-driver, who provides two of his own horses, run to about six shillings. Comparatively few of the labourers are local men. The majority of them come from the neighbouring Prättigau valley, and many, too, are Italian masons, who thus find employment for several otherwise idle months. In the midst of terrific cold, it is strange to see these sunburnt fellows perspiring over their work, although but lightly clad. Occasionally, however, a blizzard arises and, sweeping across the exposed surface of the lake, renders their lot a very miserable one. With blue hands freezing to the saw-handles, feet like lumps of lead, and eyes half blinded by the flying flakes, the denizens of sunny Italy may well long for home.

For a few winters the lake was free to all comers, owing to a quarrel between two claimants to its exclusive rights. No doubt a few of the hotels near by took this opportunity of filling their storage-cellars at a small expense; but the general public must now go to the managers of the Rhätische Bahn for their ice. It is this company which "runs the whole show," as the Americans say. In the winter of 1897-98 they sold 13,500 blocks, and the next year saw that number more than trebled. This sudden increase,

however, may partly be explained by the mildness of the season in most parts of Europe, and the consequent scarcity of ice.

The product of the Davoser See is actually to be seen being stored under the very shadow of the Jungfrau and in sight of the vast glaciers of the Grindelwald region. It is cheaper to bring it all that distance than to cut it on the spot.

Even in the height of summer it is possible to purchase Davos lake-ice. An immense enclosure has been constructed in the pine-woods on the neighbouring hillside, and here thousands of blocks are packed away for future use. A spot rarely reached by sunshine has been selected, and as an additional protection the store is fenced round with planks which shelter its precious contents from the destroyers, air and warmth. Thus the mighty army of tourists who pass across the Channel to spend their holidays in the Playground of Europe need have no fear that the supply of delicious *crèmes glacées* for the hotel dinner on Sundays will ever run short. The amount of ice taken out of the Davoser See at present can hardly be said to make a mark upon its surface. It is ready to cope with all demands, however large—a Mine of Coldness that can never be worked out, and one which ever renews what little of its wealth may be removed from it.



"APPETITE NORMAL."

A photographic study by Charles Reid, Wislaw.