

A MILE A MINUTE

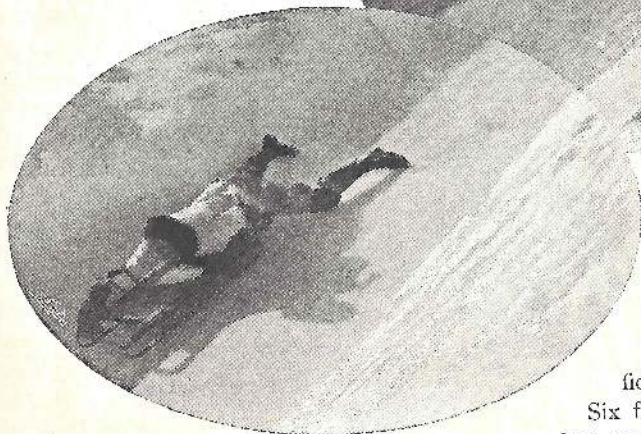
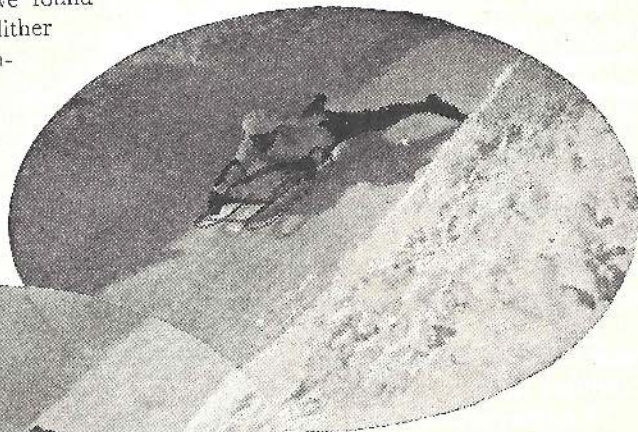
The Glorious Sport of Tobogganing, with a Special Account of the Cresta Toboggan Run, the Finest Prepared Track in the World.

By JOHN SWAFFHAM.

A GRASSY slope, an inch of snow through which the rougher bents put out mournful brown heads, a tea tray, or at best a rudely fashioned affair of rough boards—such are the tobogganing memories of most English boys. Some few who have lived or been schooled in the North may have found occasional excitement in a slither down the Yorkshire or North-umbrian fells, but for the most part the sport like its brother—sleighting—is an exotic in this country, and but amateurish at that.

Things are otherwise in

Moreover, there is no danger, though a glorious spice of excitement. It is perfectly suited for ladies, who can excel as easily as men, and it is also sociable. Hence the machine known as a Canadian toboggan has been evolved, and there are few moments



At full speed; nearing the finish of the Cresta at a mile a minute.

Greater Britain, and the pastime has its due place in the long Canadian winters. Even there it is at the doors so to speak, and therefore a thing ordinary and not pursued with the whole-hearted ardour which the Anglo-Saxon devotes to any novel sport which chances to catch his notice in unoccupied moments.

The pace increasing—taking a corner at forty miles an hour.

more full of pure pleasure than when a man scuds across country towards the close of winter on one of these lithe and fickle steeds.

Six foot long and built of the lightest but toughest laths, with a curved prow before and two supple thin wood runners beneath, balance and a modicum of nerve are all the need of their rider. As noted, you may take a lady, nay, two or three, when they will be seated and you crouched on the stern.

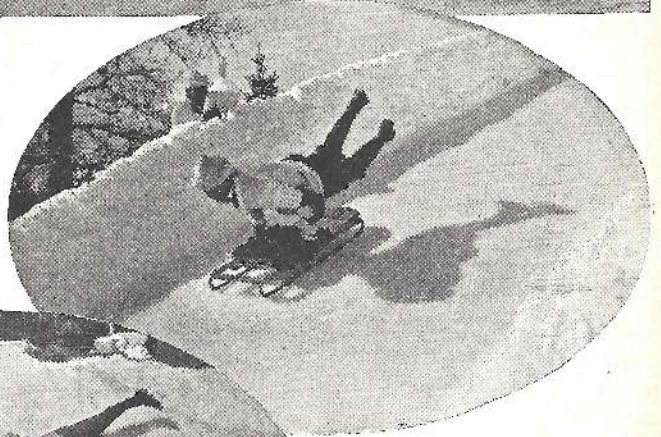
But better by far is it to ride alone, away from the beaten "slide." Under you, like a good sailing boat, the lithe board bends and billows over every rounded wave of snow,

ON A SKELETON.

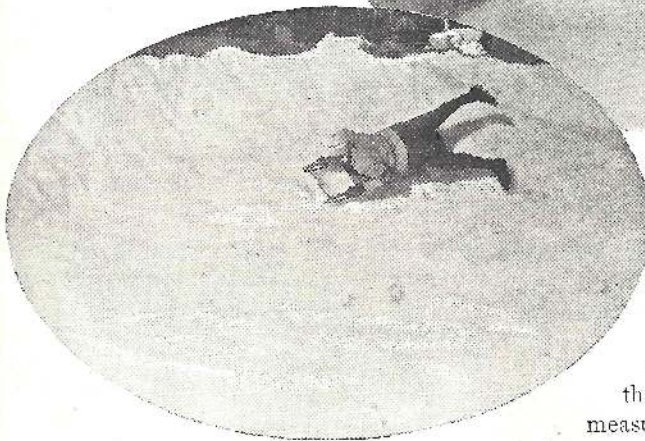
Illustrated with Photographs

by

G. R. BALLANCE.



A flying start on the Crests.



The first corner—the pace as yet not very great.

while now at a yet sharper decline it is plunging through space, to bump and shoot, and bump up again at the foot of the fall and so skim on at ever increasing speed.

But even in Canada or the High Alps such days are all too few, since for good Canadian running the snow must have lain long enough to *pack*, to sink together—*i.e.*, by its own weight and the warmth of the sun above. Then over the surface there forms by night a thin crust of hard frozen snow, stuff to skin the bare hand at a least touch, but a surface to bear the broad skimming laths without a sign of yielding.

If, however, the rider tumble, or being bumped at a steep fall in the ground does not land square on his machine, then indeed he is unhappy. For whether the toboggan continue its course and he remain thigh deep in the snow, or whether both he and

it wallow in a cold half-grave, there will be many weary yards to traverse till he come to the beaten track, and at every step there is the hard frozen crust to plough through — a labour not to be measured in words.

In a sense the Canadian toboggan is not a toboggan, by which paradoxical statement I mean that it runs on its own bottom and not on raised runners. You do not truly toboggan until you use the Swiss or American machines. A Swiss toboggan is a skeleton erection of wood which runs on bowed wooden runners, but it is a poor sort of creature at best. To ride it you need a hard beaten surface such as the high road, then sitting, cramped and uncomfortable, you progress with jolts and much slowness. Your legs wave ungracefully in front and you steer, or more often punt yourself along, with two little wooden pegs furnished at the end with steel screws and tied to your wrists with straps. It is this which visitors to Lausanne and the lower Alpine resorts exalt by the name of "looging."

The American variety may perhaps run a little faster, but is grievously uncomfortable. Take two boards about three feet long by



A bob sleigh; with its full number of passengers and a hundredweight of racing ballast, it may weigh as much as half a ton, and is a dangerous vehicle to meet with unexpectedly on the road. It is also dangerous —

two broad, split one down the middle and nail the pieces so as to form runners for the other. Round off the front corner of these runners and "shoe" them with strip iron—and behold an American toboggan. The product you may imagine has little give and take, and though the iron may run fast enough on a hard surface, many and various are the bumps and consequent bruises which are the portion of him who rides.

Besides these three, there is the *skeleton*, the last and greatest of toboggans, but before I come to the delights of this "master and servant" of his rider, it would be shameful not to say a word of the bob-sleigh, a fearful monster much affected by the English in Switzerland, where they unblushingly claim first right to the highroads, though the mere thought of producing such an instrument in an English country lane would gather the police from miles round. The picture will give a better idea of this vehicle than any words, but broadly speaking, it consists of a huge iron frame, ten to twelve feet long, with a heavily quilted seat. It carries from four to six riders, and is furnished with two pairs of runners, of which those forward carry the weight bogie-wise, and the steering is done by an apparatus of cords and pulleys, leverage

being got by the feet of the steerer, which fix against a pair of special hollowed rests in the front bar. At the back are two levers which manipulate an enormous steel-toothed brake. Some of the heaviest "bobs" have a second brake between the runners amidships.

Formidable enough in themselves, a big bob with its complement of six full-grown Britons, male and female, plus a racing "ballast" of, say, 112lb. of lead screwed to the frame, must total to not much short of half a ton. And yet, at St. Moritz, Klöstern, Arosa, and elsewhere, these awe-inspiring machines monopolise the main roads for hours daily.

Worse still, they will sometimes seek diversion by taking to themselves horses and mounting one of the smaller "passes," and hither the crew come in sleighs and so mount also, and, presto! the quiet Alpine pass echoes to the cry of "achtung! acht-oo-ng!" (beware!), before which there is no mortal thing (except the *staatspost*), but clears the way pell mell. Surely it says much for the courtesy of the native, or, shall we say, for the power of the "verdaimtes Engländer's" gold, that such things are, else terrible would be the accidents.

A "bob" is started by the last two (sometimes three) members of the "crew" who

run and push until the pace is such that they can no longer keep their legs. Then it is mount as you can, and "if you can't," the spectators will have something to laugh at. The steering and braking of the machines are matters of some science, since to take a corner too fast means a spill, while too little pace will fail to get you round. Then the "runners" have to leap off as before they leaped aboard, and so the fun begins again. At a corner, too, all the crew leans right over on the inside, and the turning, if done, is all on the inside runner, the outer being frequently innocent of all contact with mother earth. For this cause alone, an upset is apt to be extremely awkward, even dangerous, and there are various legends of really serious falls.

One tells how in a certain race the cox of the favourite had disdained to call for the

ran right on and over to plunge down the hillside. There it was hardly a matter of seconds when fair and square it struck a young pine, and the pine—ten inches in diameter—snapped under the shock. But the machine lay on its side and its riders also, of whom the steerer had concussion and a broken collar bone, the two ladies a broken thigh and a dislocated shoulder, one man a cracked rib and the other a twisted arm; and the brakesman alone was sound.

Like the bob-sleigh the racing toboggan or "skeleton" is a steel-built machine with a lightly padded plank seat, of say three feet long by a matter of twenty inches. In front of this seat the bow-shaped runners will protrude perhaps fifteen inches, behind, another six. The runners are kept rigidly to their gauge by three metal cross-bars, and the upper part of the portion which protrudes

— as well as unpleasant for those that ride when the bob-sleigh happens to capsize—as here—at a corner. Some of the passengers are almost certain to be injured.



brakes until the last moment, and then in the very midst of the worst corner the steering apparatus jammed. With a wild cry he called for brake and that too failed. At the corner was a six-foot bank of hard snow raised in case of such eventualities, on its summit many spectators. The "bob" heeding nothing

in front is wrapped in a closely wound cover of cording, which affords the indispensable "firm grip," and also obviates the unlovely results which follow the holding by the naked hand of raw metal at a temperature somewhere about zero.

On the underside of the back bows of the

runners there is a space of about nine inches which is cut in the form of one and a half figures-of-eight. There are thus three grooves [—〰—] or sharp cutting edges, designed to prevent skidding on the banks. The base of the runners is not level, but curved in the section of an arc like the blades of a figure skate.

Consequently if the rider put his weight back he runs on the grooves, which *bite* and so prevent side-slip but also decrease speed. Contrariwise when he "comes forward" —i.e., when he throws all his weight upon the front, the course is made on the smooth rounded surface whose contact with pure ice is probably as devoid of friction as any method of progression yet invented by mankind.

It will be clear to the reader that such a machine would be wasted, if indeed it could be made to run, upon anything softer than a road of almost pure ice. It will indeed run tolerably upon beaten snow, but in that case a rider must carefully avoid bringing the grooves into action or the track is torn and his speed reduced by anything up to a good third. Hence "runs," or carefully, not to say scientifically, made tracks have been built upon which to practise the sport.

Of these there are several in Switzerland, although it is credibly asserted that they exist nowhere else. Briefly they may be classified into *safe* and *unsafe* courses, the test of the former being that however long,

however steep, and however numerous or acute may be the turns, a steel skeleton which has been let go in the fair middle at the top of the track will arrive safely at the bottom.

Now supposing that, as may well be the case, the track is 1500 yards long, drops 200 feet in that distance, a gradient of 4 in 30, and has three nearly right-angled turns, such a test as I have noted may seem absurd. The calculation is, though abstract, quite

simple. It resolves itself into what height of bank raked at what degree — recall the slope at the turn of the Crystal Palace or Catford bicycle tracks — will be required to carry 56lbs. of steel running at fifty miles an hour round a corner, which involves a turn of 70 degrees out of the 90 which make a right angle. This is quite easily found and as easily arranged by a capable engineer, and many people maintain that no toboggan track should be built except on this principle.

Be this as it may, the great Cresta run at St. Moritz — the longest and most difficult in the world — is by no means safe. From the rough sketch plan on page 590 you will

see that it has no fewer than ten banks, all raked at varying degrees. It is about 1300 yards long, and falls, perhaps, 180 from the top to the foot of the second leap, though in the last seventy yards there is a rise of at least twenty feet, an arrangement intended to help the rider in the difficult task of reducing speed.

The whole length of the track is flanked



Riding "Church Leap"—a foretaste of the later joys and perils of the Cresta.

by a parapet of perhaps twelve to twenty inches high.

This is of course broken where the track crosses the road, and thereby comes, to me at least, what is the most nervous part of the run. No one needs reminding how, if he contemplate the possibility for a sufficient time, he will certainly do a thing which it required the most foolish ingenuity to compass. Thus no sane man riding down the straight would deviate in the bare five yards of roadway sufficiently to run upon the corner where the broken parapet is resumed.

Nevertheless, it has happened that the pure terror of this awful eventuality has brought it to pass.

Not long ago a well known lady rider mounted the broken ice bank at a probable rate of forty miles. As she struck the cornice—I quote an eye-witness—there went up a shower of flashing ice-splinters, and next her machine gyrated wildly to the left, the entire front twisted like a tangle of rotten wire. Last of all, there was a little cry, and a dull thud in the middle of the track some yards below.

For as she struck the lady flung herself back, and the mixed impetus of muscle with the extreme forward movement of the course flung her up in the air, where she made several complete somersaults, and so fell crash on her head. Sex saved her, for it is not possible to doubt that but for a wealth of hair closely coiled in a thick woollen cap, which cushioned her fall, a broken skull would have been the result.

Here, on the road too, was enacted the nearest approach to raw tragedy which the Cresta has yet seen. An Italian driver was halted with his sleigh just where the run crosses the road, and just when a rider was half way down the straight, and running at racing speed. To any ordinary man the results must have been just death, but this rider had an incomparable nerve and muscle; also he had magnificent skill.

He flung his body wholly off the machine,

and with a superhuman effort forced the front upwards. Thus he took the shock *on the bottom of the steel runners*, both of which snapped, but had meanwhile acted as a buffer to the blow. He was badly injured, but his wonderful pluck and resource undoubtedly saved his life.

Partly as a result of this affair, the Cresta is now worked with almost as much care as a railway. From a little summer house at the start to the foot of the second leap runs a double line of wires, of which one is a telephone, while the other works an electric clock. No one now starts until the telephone signals that the previous runner has finished the course or fallen, and more—no one starts till an Engadiner perched in a high "crow's nest" signals by bell that the railway semaphore on the road crossing stands at "road all safe!"

In connection with the "signal" this scribe once saw what might have been a horrible accident, but only succeeded in being ludicrous. A lady started and about halfway down fell, quite harmlessly. The lookout man, of the Romansch race, and therefore highly excitable, rang twice—the signal for "a fall." Shortly after the semaphore fell, and he rang again once, which signifies "course clear!"

Then turning to watch the course he saw . . . and all his southern blood boiled out in an agonised cry. For the law of the road is that once fallen you do not start again; but the eternal law of the sex is that the

whim of the moment is the only law to the woman.

This lady was a good and practised rider. Annoyed at her fall, and finding herself intact, she gathered her skirts together and started again. Thus there was a man coming down at racing speed, and a woman preparing to re-start in mid-track. Already he must overtake her within a few seconds, and then!

But lo! as the man came racing down the head of Shuttlecock, scared and pale, and "braking" for his life, the woman, crimson and flustered, fell again, and this time right



The "rake" affixed to the boots of the riders of the Cresta, which they dig into the snow to check their speed when necessary.

off the course. The man raised his "rakes" and swept on aghast, but the voice in the tower pealed loud in the jubilant gratitude of man over the fall of one more irrational daughter of Eve.

It is more than probable that no words can quite picture the sensations of him who rides the Cresta, and this yet more if he be a beginner. For one thing, the pace is so tremendous, and the call to eye and nerve and muscle so unceasing and so urgent, that there is no real realisation at the moment. Afterwards the mind may be able to put some sort of order into the innumerable accumulated impressions which have been crowded into a brief sixty to ninety seconds.

If anything be wanting to prove that semi-unconsciousness is an actual fact, it may be found in watching a rider's demeanour before he starts, as he is starting, and when he has gone some few yards. Almost invariably he shows obvious traces of considerable fear, both mental and physical; very often he is literally trembling. As he launches out he wobbles nervously, but within the least part of a second after he is face down on his machine, you may see by his features that there is no sort of thought in his mind other than the immediate need for vigilance and unwavering attention. Moreover, the most veteran riders will tell you that, however bold a start they make, there is always real nervousness in their minds until the actual moment of launching forth.

Let me now try, despite the difficulties which I have

confessed, to give a verbal sketch of one course from start to finish.

I will ride—and you may follow me on the sketch-map of the Cresta. Your predecessor on the run has just gone down, and the little group of men at the top moves aside to let you take your place at the head of the track. As you tighten your belt the man at the

telephone near by calls out the time of the last course. The bell from the look-out clangs over the snow, and somewhat nervously you adjust your

toboggan in the centre between the two parapets. Someone just below you adjusts the string which you will break and so start the electric clock which will tick away its seconds until you break another thread at the foot of

the second leap, 1300 yards below.

He rises from his task; then planting your nailed feet firmly on the ice you bend double, and with a blind rush of five or six paces fall headlong on the cushion. A

2nd Leap. f c w
wriggles
settle

Thread.

A sketch-map of the Cresta run from start to finish.

Steep rise to finish.



Here the rider, through defective steering, has run nearly off the course; this is a common mishap with beginners.

The Rise. Battle-dore.

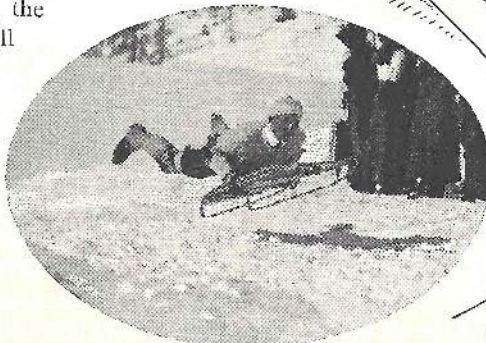
Skull's cack.

ROAD

Bulpet's corner

Scylla

Charybdis.

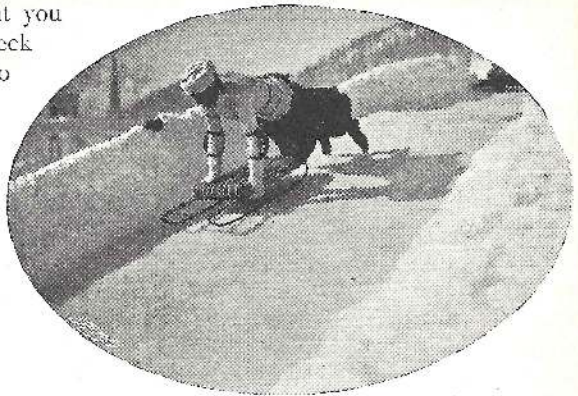


you comfortably, and for the moment you guide the machine by the balance of neck and shoulder, now to right, and now to left.

Suddenly the dull roar of your runners changes to a shrill scream as you skim the dizzy gradient of Church Leap. Now you are twenty feet up the first bank, and your left runner nearly a foot below the right. With rake, and with strong muscular effort, you force her head downward, and in an instant the effort is reversed in direction, and so once more it is from right to left as you sweep down the second and third banks. After this struggle, the long straight road before you seems an oasis from effort, but suddenly you note the rise and down go the rakes once more lest you plunge over Battledore. But Battledore tosses you to Shuttlecock, and there is a long tense wrestle, for you are now running forty miles an hour; once you were all but over, but that is in the past as you slither from Stream Corner into the long steep straight. You pull your body forward, and are half conscious of the monotonous rattle of the runners as you sweep on to the road.

Now you are running quite fifty-five miles an hour, and a second noise, the noise—almost a whistle—of air parting and joining in your wake is apparent. With a lurch and a heave you pass the main road, and again your rakes crash down to swing her round Bulpett's Corner.

On and on you dash, and the suddenness of Scylla and Charybdis is all but unnoted, for down, down you plunge into a very blackness of the last doom—it is the last leap. The pace here is probably seventy miles, and here only do you perhaps feel that, in some other life which you have no leisure to remember, it was possible to breathe a little more freely. But at the moment you were not conscious of it in this bald fashion. You probably gave a little half-gasp and laid up the sensation for future realisation. And so your head suddenly turns up and you fly into the blue sky. The broad fresh snow comes



Braking with the "rakes" fastened to the boots.

into your eyes with an almost blinding dazzle. Your toboggan *has left the ground*, and is soaring into space. Just in time you feel that there is something which ought to be done at once, and fling yourself clear. As the powdery snow chills your face you remember. You are lying fifty feet from the end of the run, your toboggan—a black mass—lies half buried another ten feet in front of you, *and you have ridden the Cresta*. With a strange lack of emotion you drag the thing away, lest another rider fall on top of it. The cord is unwound from your waist and attached to the front bar; and away you go for the long homeward climb.

"Good course!" says someone, as you pass, and as though on a sheet of shorthand notes the whole race lies before you. You can con it yard by yard; argue—here I lost a second, or—I might have ridden this bank faster. And so you form good resolves for your next course.



The problem of flight solved by the "skeleton" on the Cresta.