



THE BIGGEST LEAP ON RECORD 66 FEET FROM TROW TO PITCH.

## "NOTHING LIKE IT ON EARTH."

### THE JOYS OF TOBOGGANING.

BY THE HON. HARRY GIBSON.

TO most people who read the title of this article it is probable that the word tobogganing will conjure up visions of those Canadian pictures in which four or five figures of both sexes, clad in quaint blanket costumes and sitting on a kind of flat board curled up in front, are flying wildly down a precipitous snow slope.

To many it may, perhaps, revive the recollection of some snowfall in their childhood, when, putting the kitchen tea-tray to unwonted use, they spent a merry morning sliding down the nearest hillside.

From such simple forms of the amusement it is a far cry to tobogganing as practised to-day on the Cresta Run at St. Moritz. Here, as in more momentous affairs, evolution has been at work, and in the course of some 17 years has produced a sport of which it is not going too far to say that there is nothing like it on earth.

To begin with the toboggan used in

racing: it is a modification of the well-known American clipper sled, with all the superfluous parts removed. It consists of two parallel steel springs of circular section, which form both the runners and sides of the machines, and are held together by three steel cross-pieces. To these is fastened a board with a thick leather cushion, upon which the rider lies. For one of the peculiarities of this form of tobogganing is that, instead of sitting upright in the ordinary way, all riders when racing lie flat on their faces and go down the Run head-foremost, holding the sides of the machine with both hands. On their feet they wear steel toe-caps, armed with sharp teeth, called rakes, which are used for steering and braking at the more difficult corners on the Run.

And now to describe this wonderful Cresta Run itself. I may say at once that it is impossible by mere words to convey

any satisfactory conception of the reality, but with the help of the illustrations, which are from photographs by the writer, it is to be hoped that its main features and difficulties may be made intelligible. Imagine, then, a glittering track seven feet wide, made of hard, polished ice, winding to and fro like a silver serpent down the snow-clad gorge from St. Moritz to the little village of Cresta, measuring exactly three-quarters of a mile in length, and with a fall from start to finish of about 550 feet.

Wherever the Run changes its direction it is banked up steeply on the outside of the curve just as the ends of a bicycle track are banked. It is these curves and the method of banking them which make the Cresta Run so difficult and fascinating both to riders and spectators. On all other toboggan runs one simply lets oneself go as fast as possible, and given other things equal, by the laws of dynamics the heaviest weight is bound to reach the bottom in the shortest time. But on the Cresta, judgment comes into play, and at each corner one has to decide how much pace must be taken off (by pressing the steel rakes on the feet into the ice) in order to get round.

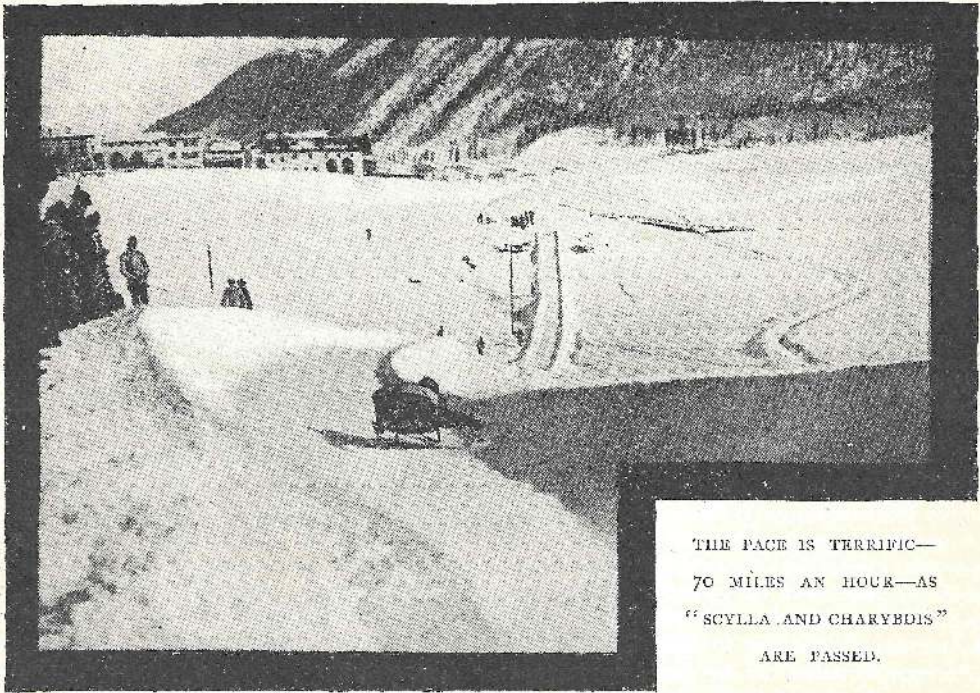
For the banks are constructed with fiendish ingenuity in such a manner that, while a

toboggan can turn a corner in safety at a particular rate of speed, yet if it goes the least bit too fast, centrifugal force will carry it up and over the bank, to plunge its rider headlong into the soft snow at the side of the run. But here the personal element comes into play. It is possible, to a certain extent, to take liberties with the laws of dynamics, and where an unskilled rider cannot take a bank at a higher rate of speed than 25 miles an hour without going over it, a crack rider may dash at it at more than 35 miles an hour, and yet swing round in perfect safety, his skill, strength, activity, judgment, and "eye for a course" making it easy for him to perform feats which are impossible to the average man.

From the spectator's point of view, the sport possibly lacks something in that the element of direct competition is absent. But it makes one shudder to think what might happen if two men were to attempt to race down side by side. Sooner or later at one of the big turns the inevitable collision would be bound to take place, with results too awful to contemplate. As it is, all the racing is against time, the riders going down one after the other, and being timed to tenths of seconds by a most elaborate system of electrical timing, in which the



THE START—DIVING HEAD FOREMOST DOWN THE SLOPE TO THE "CHURCH LEAP."



THE PACE IS TERRIFIC—  
70 MILES AN HOUR—AS  
"SCYLLA AND CHARYBDIS"  
ARE PASSED.

rider, breaking a thread at the start, sets the clock going, and snapping another at the finish, stops it.

But even without the element of personal competition, a visitor to the grand stand on a race-day will find himself provided with as much excitement as he can conveniently stand. In fact, if it chances to be his first view of the Cresta, he will hold his breath and gasp more than once before the day's racing is ended.

From the grand stand the view is magnificent. All round are pine-clad slopes, above which tower the snowy peaks of the great Engadine mountains, while overhead is a cloudless canopy of deepest blue, out of which the sun beats down with almost tropical heat, although in the shade there may be 10 or 15 degrees of frost.

But who ever looks at the scenery? We are here to see the Cresta. We cannot see the actual starting place, but we get an excellent view of the more difficult corners. On our right is the long steep slope from the "Stable Junction" to the "Church Leap." Directly below us, in the shadow of the pine trees, looms that huge dark bank—the first bank of the Leap—which turns the course to the left at a sharp angle, and is the most difficult corner on the run.

Further to our left are the second and third banks, marking two more difficult turns. The run then disappears behind the hill for about 200 yards, and comes into sight again at the famous S-shaped corners—"Battledore" and "Shuttlecock"—and with glasses we can follow the long "straight" for 300 yards till "Bulpett's Corner" turns it sharply to the right to that dread combination known as "Scylla and Charybdis." High up on the hill behind us is the "Crow's Nest," from which the system of safety signals is worked, and on which is displayed the telegraph board, shewing the time made by each competitor.

But it is time to attend to business. Nine o'clock strikes, and sharp to time the clang of the bell is heard as the first man is started on his way. Perhaps he is one of the favourites for the race and, as the skim of his runners is heard along the "Terrace," we wait eagerly to see how he will acquit himself. A moment's suspense, and he flashes into sight and dives head-foremost down the slope to the "Church Leap." To the uninitiated it is awful to watch that human figure lying so still on the machine, which is flying to what seems certain destruction on that grim black bank below. Suddenly there is a quick movement. He

leaps back and claps his rakes hard into the ice, while every muscle in his body is braced, as rigid as a bar of steel, from his head to his heels, in the effort to check the speed. The machine quivers under the strain, and the speed slows perceptibly. He leaps on to the bank, and as he does so the left foot shoots out sharply to the side, and with a great heave of the shoulders he swings the machine round fast and low. Another swing to the right, followed by yet another to the left, and he is safely through the three banks, and darts away out of sight down the straight to "Battledore."

After a few seconds he flashes into sight again, braking hard up "the rise"; then, wrenching the machine round "Battledore," he rushes at "Shuttlecock." For a few moments it is touch-and-go as he races round the big bank within a few inches of the top. But all goes well, and he speeds down the straight to "Bulpett's Corner," at which point the pace is terrific, and darts round to "Scylla and Charybdis." Once round there he is in comparative safety, and fairly flies down the steep descent to the winning post. Shooting past this at a speed of some 70 miles an hour, he tears up the steep slope at the finish, leaping high into the air as he tops the brow, and then, braking with all his might, he brings the machine to a standstill in the snow at the top of the hill.

Some of these leaps at the finish are very considerable. What is supposed to be the biggest leap on record was made by Mr. P. Spence on March 10th, 1900. He was timed as he passed the winning post to be travelling at a speed of 67 miles an hour. Racing full speed up the hill, he succeeded in covering the extraordinary distance of 66 feet from brow to pitch, and the writer was fortunate enough to secure an excellent photograph of him while in mid-air.

But it must not be imagined that all the competitors succeed in bringing off so successful a course as the one we have described. Hairbreadth escapes are many, and not a few bring their course to a premature conclusion with a somer-

sault over one or other of the difficult corners. Serious accidents are fortunately rare, and, as a rule, beyond a shaking, a rider is none the worse for his fall.

The time to see the most brilliant riding (and the greatest number of falls) is at the end of February or beginning of March, in the week preceding the Grand National Race, the great event of the tobogganing year. Everyone is then trying to go a bit faster than is possible, and things become very interesting for the spectators. On March 6th, 1900, the famous Swiss rider, Herr E. Thoma, succeeded in creating a new record for the Cresta, covering the three-quarters of a mile in  $56\frac{2}{3}$  secs., which gives an average speed over the whole distance of just over 40 miles an hour.

This, however, gives no idea of the

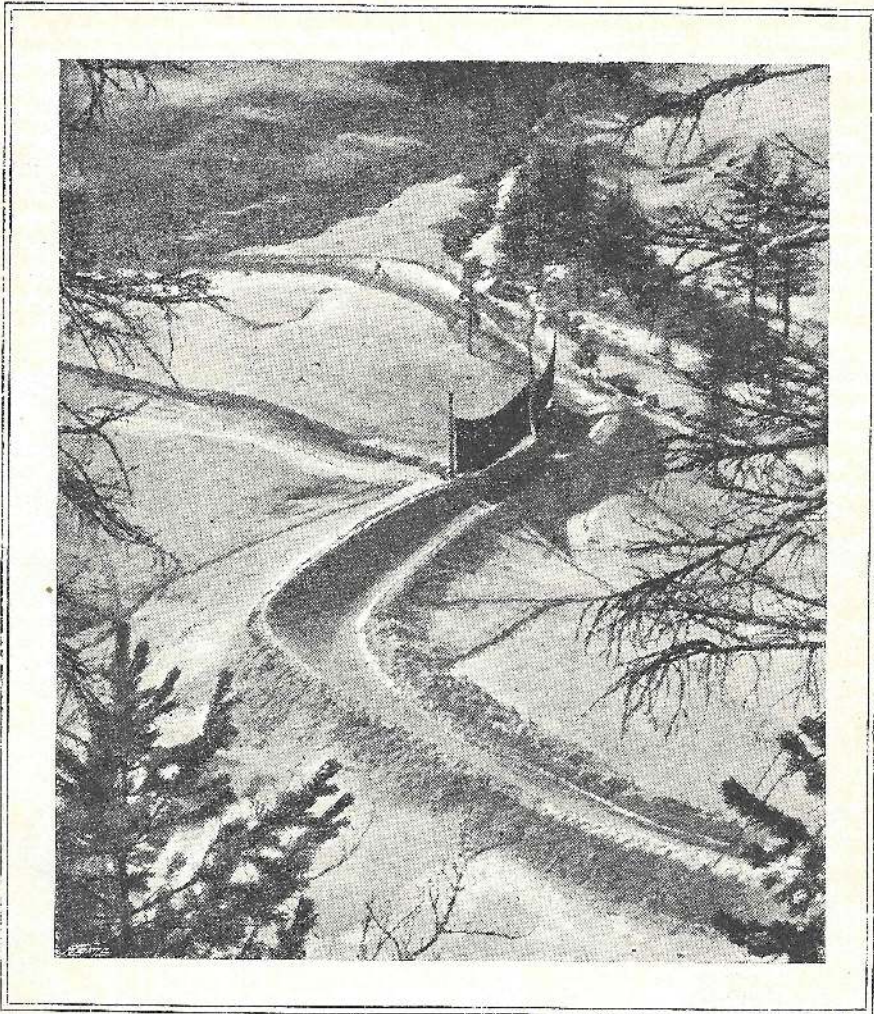


TURNING AT THE "CHURCH LEAD."

maximum speed attained on the run in the straight and at the finish. With a view to deciding this vexed question, a race was held on March 10th, 1900, in which the riders started from the top, but the times were

the fact that the day was unfavourable and the course not in good order, but soft in places.

Photographers may be interested to know that the illustrations for this article were all



THE FAMOUS S-SHAPED "BATTLEDORE" AND "SHUTTLECOCK" CORNERS ON THE CRESTA RUN.

taken by the electric apparatus over the last 50 yards of the course.

Two riders—Capt. Vaughan Williams and Herr E. Badrute—were timed to cover the 50 yards in  $1\frac{4}{25}$  secs., which gives a speed of 73 miles an hour; and this in spite of

taken during the months of February and March, the apparatus used being a twin-lens hand camera fitted with Dallmeyer lenses working at F'6, a Thornton-Pickard focal-plane shutter working at  $\frac{1}{5000}$  sec., and Lumière extra-rapid plates.