Moving and Climbing on Skis

W. R. Rickmers and E. C. Richardson, 1905

Selected pages from Ski-Running.

Illustrated early ski instruction covers turning in place, walking on skis and getting up a slope.

Compiled for The Survival University PDF collection

PART III.

TECHNICAL.

PRELIMINARY ADVICE.

We would very strongly recommend the beginner to make his first efforts on some one or other of the good snow conditions described on pp. 21 and 22. Freshly fallen deep snow is especially to be avoided, for not only does it afford heavy and difficult going, but a fall in it is apt to be dangerous. This is, of course, the reverse of what one would expect; but what happens is that the ski sink in deeply, and in the event of a fall they are apt to stick and sprain the ankle or knee. The firmer the snow the better it is, provided always that it be of sufficient depth and that it be fair snow, and not ice-crust.

All things considered, we would advise the beginner to learn to go slowly before he learns to go fast. That is to say, as soon as he can run straight fairly well, we would have him learn how to regulate his speed and steer by means of what is known as "stemming" (see *infra*, p. 69). In practising this movement he will at the same time learn how to balance himself with the weight on one foot, a necessary accomplishment; for, though in ski-running both ski are usually kept on the ground, *the weight is nearly always mainly on one foot*. It is well to pause and try to appreciate this very important fact before reading further.

After he has learnt something of stemming, and provided that he has followed our instructions and used his pole as little as possible (and then only as we direct), he should not find much difficulty in acquiring some speed in glissading. He should then begin to take short tours of, say, an hour or two's duration, gradually lengthening them as his proficiency increases. *He should when on tour endeavour to apply the knowledge which he has gained on the practice ground, and on the practice ground he should try to overcome those difficulties which he has encountered on tour.* There is no sense in keeping on climbing up and sliding straight down the same easy hill; yet such is the commonest form of ski-ing at fashionable Swiss winter resorts!

As soon as the beginner can "turn on the spot," run straight fairly well, and "stem," he *can* (we do not say he *should*) go where he pleases. He will, however, remain slow and awkward, and he will miss a great deal of the beauty of the sport if he rests content with these easy accomplishments. We trust that he will be of a more ambitious disposition, and that he will proceed to the mastery of the "S" turn and of the "Telemark" and "Christiania" swings; and we strongly recommend him to learn something of jumping, not only on account of the amusement which he will certainly derive from it, but because it is the very best means of gaining a good balance for ordinary running.

It is of the greatest importance to cultivate a freedom and elasticity of movement and position. The muscles should be as strong as iron, but as flexible as rope. The knees should be pliant, and should act like the springs of a carriage in relation to the rest of the body. Be watchful, but courageous, and try hard not to fall.

LEAN FORWARD!

Lean forward is the watchword of the ski-runner, and it is just as well to explain what is meant by it before proceeding further.

Place your ski parallel, one about a foot in front of the other, and throw the body forward as much as possible; one ought to feel as if about to fall on one's nose. To the onlooker one seems to be standing on the *entire* sole of the foot, but in reality all the weight rests on the front part and the toes. Thus, stand erect on the ski, the knees a little bent, and then lean forward without bending any part of your body (especially not the region of the hips) and without raising the heel; then you ought to feel what is meant. Never assume a position as if sitting down or about to do so, because that would press down the heel. Every violation of this great rule of leaning forward is punished by the ski "bolting" from under one.

TO LIFT THE POINT OF THE SKI.

To lift the point of the ski seems a very simple matter, but it is at least ten to one that the novice will do it wrong.

(1)



(2)



(3)



Fig. 13.—Turning on the Spot.

Press the heel of the ski down on the ground with your heel, and lift the point upwards with your toe. *Do not raise any part of your foot from the ski.*

To lift the heel of the ski reverse the above. Here it will not be possible to keep the heel of the foot on the heel of the ski, but the binding will raise the latter from the ground to some extent.

TURNING ON THE SPOT.

Turning on the spot is a puzzle to the beginner, though simple when shown.

Lift one ski straight to the front (see Fig. 13 (1)), putting the heel end as far away from you as you can, then turn it outwards and away from you smartly, swinging the point right round and leaving the heel resting on the snow, then put it down, point by heel, alongside of the other ski. This twisted position (Fig. 13 (2)) is the only difficulty, but very few attempts will soon show that it is not so bad or cramped as it seemed at first. In this position hold the knees slightly bent. Lastly, *raise the point* of the other ski and swing it round. You will find it easier to learn this movement with the assistance of your stick, which should first be held obliquely across the body, pointing in the opposite direction to that in which you are turning. Then after assuming position (2) shift it across as in (3), and lastly swing round the other ski. As soon as you are proficient with the help of the stick practise without it—and, of course, both to right and to left. It is not necessary to stand on the snow in order to learn these movements. The carpet will do, but remove all Dresden china from the immediate neighbourhood.

WALKING WITH SKI ON THE LEVEL.

Walking with ski on the level differs from ordinary walking or skating in this, that *one must not strike out*, there being no fulcrum or point of resistance. Keep the ski *parallel* and *as close together as possible* (closer than shown in the diagram), for a narrow spoor has many advantages, besides being "good form." Throw the weight of the body forward and *slide on the advanced leg:* the "hind" leg must be absolutely

disengaged—that is to say, do not strike out by trying to press the snow with it. Begin with long, slow steps, lunging forward with bent knee (Fig. 14). Do not lift the ski from the ground, but slide along regularly and conscientiously; do not hurry or flurry, but save your breath. In one's first steps one must specially cultivate precision, sliding forward with ski

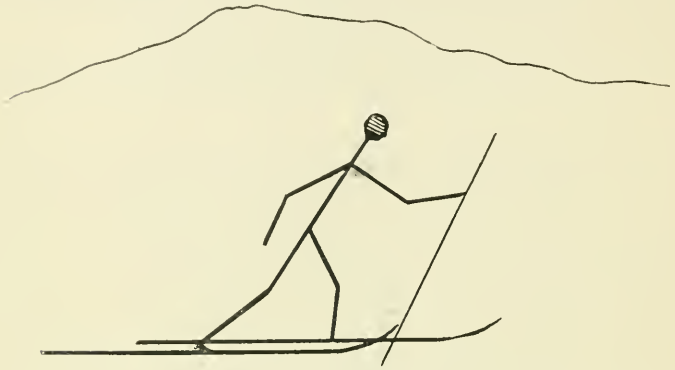


Fig. 14.—On the Level.
The ski should be kept closer together than shown. The closer the better.

exactly parallel, and distributing the weight properly. Lean forward! slide! *

A single stick on the level is of but little service, but with two sticks the pace can be considerably increased, especially on a good firm surface. Both sticks should be thrown forward simultaneously, and the slide on the advanced leg accelerated by a vigorous push with both arms. When proceeding in this way it is well to observe some kind of rhythm; and, as the snow is seldom slippery enough to admit of a push at each step, one should run, for example, one, two, three steps (swinging the sticks forward), and then push with the arms, sliding on, say, the right leg; then run one, two, three steps and push, sliding on the left leg, and so on.

UP-HILL.

To the laity it is a matter for wonder how it is possible to climb any considerable hill at all on ski. We remember

* Look at the frontispiece for an example of first-class level-running.



A Stiff Climb.

Photo by E. C. Richardson.

well the look of polite incredulity which passed across the face of a mountaineering friend some years ago when we told him that a certain well-known pass in the Alps had been traversed in winter. He had tried ski himself, but had made very little of them, and the pass in question is a stiff one to negotiate even in summer. But now long climbs on ski in winter have become so common that it is unnecessary to pursue the subject further than to quote the classical observation of Olaus Magnus, "There exists no mountain, however high, which by means of cunning by-ways he (the ski-runner) cannot surmount."

It is, however, well to observe here that some of the accounts of the ease with which one can climb hills on ski have been exaggerated. In rare conditions of perfect snow one may perhaps ascend as quickly as in summer, but, roughly speaking, it may be said that ski are about twenty-five per cent. slower uphill than boots. We are here, of course, speaking of climbing a steep mountain where it is necessary to zig-zag (see *infra*), and not of walking straight up a moderate slope. Moreover, whether we slide the ski upwards in winter or whether we carry a corresponding weight on our backs in summer, the fact remains that some 10lb. or so have to be raised so many feet, and we are handicapped to that extent. Where ski really have the advantage is after the summit has been reached—of which more anon.

Up to a certain degree of steepness (varying with the quality of the snow) there is little or no difference between the methods used for climbing and for walking on the level. Snow is not an absolutely slippery substance, and the ski always adhere to it to some extent. There comes, however, very soon a point beyond which we can no longer slide as on the level, and shortly afterwards another, where the force of gravity overcomes the "stickiness" of the snow and we begin to slip back. These points are very different with the expert and the beginner, and the former will slide easily straight up a slope upon which the latter will slip hopelessly.

In ascending a steep incline the art lies (1) in knowing (and only experience can teach one) just how steeply one can go without a slip; (2) in the correct placing of the ski in the snow;

and (3) in the correct balancing of the body upon the ski when so placed. The correct placing of the ski is not a difficult matter. The secret lies in raising the point of the ski (see p. 53) an inch or two from the ground and bringing it *straight* down with a *firm* stamp. The stamp is at first nearly always made too gently by ladies and too hard by men. Imagine you are cracking a walnut—that will be about right. Remember that *where the foot is brought down there it must stop.* If it slips even the least tiny bit you must stamp again.

Next bring the weight forward as evenly as possible on to the ski you have stamped, and advance the other leg. In doing so



FIG. 15.—*Climbing a slope.*—*s* = the fall of the slope; *t* = turn here. The shaded parts are obstructions (rocks, thick growth, &c.).

take the greatest care to balance the weight of the body *straight over* the stamped ski; lean neither backwards nor forwards, or you are certain to slip.

In hill-climbing it is, of course, expedient to go as steeply as possible, but the beginner will find that it pays best to take things easily at first, as a single slip backwards is more exhausting than twenty steps forwards.

To negotiate a steep slope one must go across and upward at a convenient angle, making a zig-zag track, as an engineer would plan a good mountain road (Fig. 15). Turn at the corners as described, p. 55, and when so doing remember to assume a safe

standing position, for a slip on a steep slope may be attended by unpleasant consequences. The correct position in which to stand

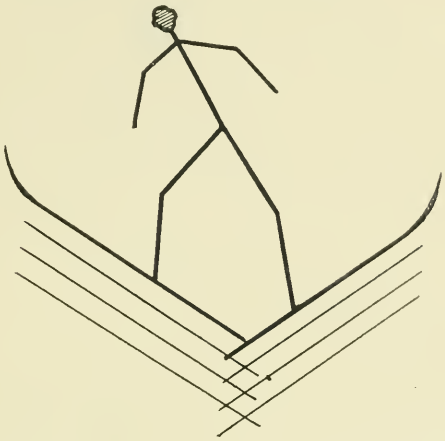


Fig. 16.—"*Herring-boning.*"—The figure is in the act of lifting the right ski over the heel of the left. The light lines are his tracks.

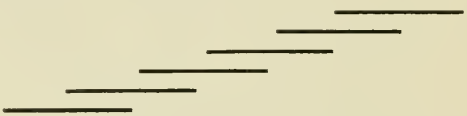
Note.—Swing the body well, as shown.



Fig. 17.—*Hill climbing sideways.*—Used only on *very* steep slopes. The light lines are old tracks.

before turning is clearly with the ski horizontally in space—that is to say, at right angles to the direction of the gradient; then one cannot slip while engrossed in the task.

The diagrams on page 59 show two other methods of hill-climbing which are chiefly useful for short slopes. They are both too fatiguing to be employed for any length of time. A modification of the style shown in Fig. 17 is, however, very useful, especially on crusted snow. It consists in going forwards and upwards at the same time, lifting the ski at every step. This is not so very tiring, and may on a hard surface be kept up for a considerable length of time without undue fatigue. The track formed will appear as under.



It is important when proceeding in this way to remember, when lifting the *upper* ski, *to raise its heel from the snow* (see p. 55) *and place it well up-hill in a horizontal position.* Most beginners move only the front part of the ski, and place it in the snow with the heel pointing down hill. Even if the upper ski does not slip in this wrong position (as usually happens), the lower ski, when it comes to be lifted, is sure to be placed across the heel of the upper ski, imprisoning it and preventing the next step being taken. You are certain to make this mistake very frequently at first, and it will land you in all sorts of difficulties and entanglements, but do not forget that we warned you against it.

A single stick is not of any very positive assistance up-hill, though it has a negative value on *very* steep ground both in aiding the balance and in giving a feeling of security against slipping. In traversing a slope it should be held across the body with the point touching the snow on the upper side. The beginner will also find it useful to assist him in rising to his feet after a fall. He should, however, entirely abandon all idea of pulling himself up-hill with his stick; to do so is quite impossible. Balance is what is required, *plus* a little thigh muscle, which will come with practice.

Two sticks are, however, of considerable help, especially on moderate slopes up which it is possible to go straight. They

should be placed in the snow alternately, after the manner which nature dictates. In traversing steep ground they cease to be of service, for the lower one is not long enough to reach the slope below one's feet, and the upper one cannot be used effectively on the bank at one's side. Under such circumstances it is better, and safer, to hold them together and to use them as one, as described above.

In general for long climbs it is best to go comparatively slowly and to "keep at it." The speed of a party should be that of the slowest man. If you happen to be that unfortunate individual, don't lag behind if you can help it, but don't hesitate to shout to the others if they are going too fast for you. If, however, they are novices and persist in rushing, slow down and go your own pace. It is not at all improbable that if you go steadily you may be the first at the top, after all; but even if you arrive twenty minutes later than the others you are in no wise dishonoured.

Strictly between ourselves, we rather like to be last man, and to allow our more energetic friends to go on ahead. The last man has far the easiest place on a newly made track, and we do not thirst for the glory of breaking the snow.

But, of course, a properly organised party should keep together, and its members should take it in turns to go ahead. It is in itself a pleasure to move steadily upwards in this way, the ski and the sticks keeping time, and it makes the way seem shorter and easier for everybody.

One concluding word of advice may here be given. Eat your lunch some little distance below your intended highest point. The tops of mountains and passes are apt to be draughty, and, besides, it is much better to begin the run down when the muscles are warm and supple than to wait till after they have turned cold and stiff from sitting about.

GLIDING DOWN.

Gliding down is the characteristic part of ski-running, as distinct from the use of pattens, Canadian snow-shoes, &c. It is the reward reaped after the labours of the climb. The ascent is, indeed, a struggle against gravity, but the descent is