

meeting the slope, the ski are parallel to it. Steady arm movement.

Ski well together, parallel and in the same plane.

Towards the end of the flight the eyes should be fixed on the spot where the contact with the snow will be made, so as to be well prepared for a steady and sure landing.

THE LANDING.—Must be firm and elastic; the whole body in balance and the ski well together.

The knees should be bent when landing, the foremost leg is advanced immediately with knee slightly bent, rear leg as a rule more so. On a flat landing, and when the snow is in a bad condition, the foremost leg should be further advanced.

After landing, an upright position should be regained as soon as possible. At the completion of the run either the Telemark or Christiania may be used to finish.

CROSS-COUNTRY RACES

1. The course of the race shall be plainly marked out in the usual manner.

2. Contestants shall be numbered and run consecutively. Their numbers and corresponding places in the race shall be allotted by drawing.

3. The contestants shall start at regular intervals of one minute each. The time at start and finish shall be taken with a stop watch by two regularly-appointed timers. The elapsed times shall decide the winners of the race.

4. A contestant on call of "track" shall immediately give the overtaking skier one-half his track and shall allow him to pass without any interference.

5. All claims must be immediately lodged with the officials conducting the race.

NO. 2—TABLE GIVING POINTS OF AWARD FOR RACES

This Table is to be used in combination with No. 1 Table to determine the "all round" ranking. The finish points in No. 1 Table added to award points in No. 2 Table, divided by two, gives the competitors' average "all round score."

| | Difference in Time | | | | Award Points |
|------|--------------------|------|------|------|--------------|
| | Min. | Sec. | Min. | Sec. | |
| From | 00 | 00 | to | 0 | 14 |
| " | | 15 | " | | 19.875 |
| " | | 30 | " | | 19.750 |
| " | | 45 | " | | 19.625 |
| " | 1 | 00 | " | 1 | 19.500 |
| " | 1 | 15 | " | 1 | 19.375 |
| " | 1 | 30 | " | 1 | 19.250 |
| " | 1 | 45 | " | 1 | 19.125 |
| " | 2 | 00 | " | 2 | 19.000 |
| " | 2 | 15 | " | 2 | 18.875 |
| " | 2 | 30 | " | 2 | 18.750 |
| " | 2 | 45 | " | 2 | 18.625 |
| " | 3 | 00 | " | 3 | 18.500 |
| " | 3 | 15 | " | 3 | 18.375 |
| " | 3 | 30 | " | 3 | 18.250 |
| " | 3 | 45 | " | 3 | 18.125 |
| " | 4 | 00 | " | 4 | 18.000 |
| " | 4 | 15 | " | 4 | 17.875 |
| " | 4 | 30 | " | 4 | 17.750 |
| " | 4 | 45 | " | 4 | 17.625 |
| " | 5 | 00 | " | 5 | 17.500 |
| " | 5 | 15 | " | 5 | 17.375 |
| " | 5 | 30 | " | 5 | 17.250 |
| " | 5 | 45 | " | 5 | 17.125 |
| " | 6 | 00 | " | 6 | 17.000 |
| " | 6 | 15 | " | 6 | 16.875 |
| " | 6 | 30 | " | 6 | 16.750 |
| " | 6 | 45 | " | 6 | 16.625 |
| " | 7 | 00 | " | 7 | 16.500 |
| " | 7 | 15 | " | 7 | 16.375 |

| | Difference in Time | | | | Award Points |
|------|--------------------|------|------|------|--------------|
| | Min. | Sec. | Min. | Sec. | |
| From | 7 | 30 | to | 7 | 44 |
| " | 7 | 45 | " | 7 | 59 |
| " | 8 | 00 | " | 8 | 14 |
| " | 8 | 15 | " | 8 | 29 |
| " | 8 | 30 | " | 8 | 44 |
| " | 8 | 45 | " | 8 | 59 |
| " | 9 | 00 | " | 9 | 14 |
| " | 9 | 15 | " | 9 | 29 |
| " | 9 | 30 | " | 9 | 44 |
| " | 9 | 45 | " | 9 | 59 |
| " | 10 | 00 | " | 10 | 14 |

NOTE—20 points are given to the best time and from the elapsed times of each other competitor is deducted an eighth of a point (.125) for each 15 seconds excess.

RULES OF FEDERATION INTERNATIONAL DE SKI (F.I.S.)

GOVERNING DOWN-HILL AND SLALOM RACES

GENERAL

ORGANIZATION — OFFICIALS

SECTION 36.—An International Race requires at least the following officials:—

- (a) An Organization Committee, including a President and a Vice-President.
- (b) A Technical Committee, including a President and Vice-President.
- (c) A Referee.
- (d) A Chief of the Course, with assistants.
- (e) A Starter, with assistants.
- (f) At least two time-keepers, with secretaries.
- (g) A Judge at the finish, with assistants.
- (h) Flag-keepers, with assistants (Slalom).
- (i) Patrolmen.

DUTIES OF OFFICIALS

SECTION 37.—(a) The Organization Committee shall be elected by the National Federation or by the Club organizing the race, and shall be responsible for the general organization of the race. (Announcement, entries, lodgings, press, medical service, etc.)

(b) The Technical Committee shall be elected by the National Federation or the Club organizing the race, and shall be responsible for the technical part of the race (laying out of the course, holding the races, calculations, etc.) This committee may include the referee, the chief of the course, the starter, the time-keeper, the judge at the finish and the flag officials. All questions shall be decided by a majority vote, the President being entitled to vote and in case of a tie, having the deciding vote. This Committee shall be responsible for the laying out of the Downhill course and the placing of the flags. They shall select the slope on which the Slalom shall take place. All protests must be addressed to the Technical Committee (see Section 12). The President shall, in addition, inform the competitors before the race of any special regulation made by this Committee.

(c) REFEREE.—The referee appointed by the Technical Committee shall settle all questions that may arise on the spot, while the race is going on. He alone shall have the right to decide whether a race should be postponed.

(d) The Chief of the course shall flag the course according to the general instructions of the Technical Committee.

He alone shall be responsible for the setting out of the direction flags, the marking of single tracks and shall also be responsible for the condition of the course immediately before and during the race.

(e) The Starter shall be responsible for the racers leaving at regular stated intervals (see Section 45).

(f) The Time-keepers shall be responsible for recording the time. Each time-keeper may have a secretary. (See Section 45).

(g) The Judge at the finishing line shall decide the order of the finish of the competitors.

(h) **FLAG KEEPERS.** In a Slalom race, a flag keeper shall be stationed near each group of test flags. They shall impose the penalties, and record the same on special printed forms which they shall sign and hand over to the Technical Committee immediately after the race. Each flag keeper is empowered to impose penalties for faults made by the competitors while passing the flags included in the part of the course over which he has supervision, and for which he is responsible.

(i) Patrolmen shall watch over the course during the Downhill races and take notes on the manner in which the rules are observed. Immediately after the race, the patrolmen shall sign their notes and hand the same to the Technical Committee.

DOWNHILL RACES

SECTION 38.—(a) DOWNHILL RACES. The size of the flags used in Downhill races shall be as nearly as possible 50 x 50 centimetres (20 x 20 inches). For the flagging of the course in Downhill races, the three following colours shall be used:—

Red and yellow flags are direction flags; they are set out singly. It is not compulsory for the competitor to pass within a specified distance of the direction flags. The red flags show the surest and best course; the yellow flags are for warning purposes, to warn the competitor against too high a speed.

Blue flags with white edges are control flags; they are set out in pairs through which the competitor must pass.

Red flags crossed with blue flags shall be set out in pairs at the beginning and at the end of each single track and the competitors must pass between the same (see Section 48).

(b) The finishing line must be shown by a piece of canvass stretched between the two finishing posts.

COMPETITORS

SECTION 39.—Competitors shall be over 18 years of age, unless the Federation or the club organizing the race otherwise decides.

EQUIPMENT

SECTION 40.—Competitors may repair their equipment (sticks, straps, etc.) only with the tools and spare parts which they themselves carry. In a team race, the members of the same team may use the equipment from other members of their own team, but competitors must not borrow spare parts from spectators.

In races run in two parts (see Sections 47 and 49) competitors may complete and renew their equipment before the second part is started.

LOST OR BROKEN SKI

SECTION 41.—A competitor who loses or breaks his ski during the race may finish the race on one ski. On the other hand, a competitor who crosses the finishing line without skis or who goes over any part of the course on foot shall be disqualified.

HELP FROM STICKS

SECTION 42.—Any competitor holding one or both sticks with both hands or who, in any other

manner, violates the regulations prohibiting braking with sticks, shall be disqualified.

ANNOUNCEMENT OF THE COURSE

SECTION 43.—The course shall be known in a general way two days prior to the competition and shall be open to the competitors for training until it is flagged. From the moment the flags are set out, no one shall be allowed to go over the course without a guide and without special authorization. Any infraction of this regulation shall be a cause for disqualification. The flagged course of a Slalom or of a Downhill race shall be shown and explained on the spot to the competitors by the chief of the course.

FINISH OF THE RACE

SECTION 44.—A competitor shall not be considered as having completed the course until he has crossed the finishing line with both feet.

STARTING AND TIME-KEEPING

SECTION 45.—When time-keeping is done by hand, the time-keeper shall start each competitor by placing his hand on him. In Slalom races, times are recorded up to 1/5 of a second when time-keeping is done by hand, and up to 1/10 of a second when time-keeping is done by electricity (electrical installations at the start and at the finish, connected by wire).

In a Downhill race, times are recorded only to 1/5 of a second, whether time-keeping is done by hand or electrically.

When the times are measured up to 1/5 of a second with a stop-watch recording tenths of a second, 0.1 shall be rounded off to 0.2, 0.3, 0.4, etc. If times are measured up to 1/10 of a second with a stop-watch recording smaller fractions of a second, 0.05 shall be rounded off to 0.1, etc. In Slalom races, times are rounded off for each part of the course.*

When time-keeping is done by hand, the start is made in the following manner:—

The starter places his hand on the competitor and puts the question: "Are you ready?" (The question is put about 3 seconds before the start).

"Go." (In giving this order the starter takes his hand off the competitor). No count is made at the start.

In Slalom races, when time-keeping is done by hand, the times must be recorded by three time-keepers. If two of these time-keepers have recorded the same time, this shall be taken to be the right time. If different times are recorded by each of the three time-keepers, the average between the extremes shall be taken as the right time. If, by some mistake, only two of the three time-keepers have taken the time, the slowest time recorded shall be taken as the right one. All times recorded should be entered on the report of the race.

In Downhill races, when time-keeping is done by hand, the times should be recorded by at least three time-keepers, the first of whom shall take the hours and minutes and the other two the seconds and the fractions of seconds; one of the latter shall take the times by means of a chronograph.

CLEARING OF THE COURSE

SECTION 46.—All necessary precautions shall be taken to clear the course of all spectators for both Downhill and Slalom races.

COURSE

SECTION 47.—The course of a Downhill race must not include flat or up-hill sections, save for

*For instance: In a Slalom race, the times are recorded up to 1/10 of a second. Assuming that a competitor has taken 42.05 (rounded off to 42.1) to cover the first part and 42.07 (rounded off to 42.1) to cover the second part, the final time is equivalent to 84.2.

exceptionally good courses, and only when such flat or up-hill sections are very short.

The course should include as high a drop as possible (800 metres or 2,600 feet). When the conditions of snow or of terrain are such as to make it advisable to hold the race in two parts, the Technical Committee may so decide. As much as possible both parts of the course should present different conditions of terrain.

SINGLE TRACK

SECTION 48.—If any part of the course should be covered with soft and heavy snow, to such an extent that the first competitor to start would be heavily handicapped, the chief of the course shall have a track made in the snow on that part of the course, before the race.

A competitor who is about to pass another competitor on a single track must warn the competitor ahead of him by shouting the word "Track." The latter must leave the track at once; he must not, in any manner, hinder the competitor who is trying to pass him.

STARTING

SECTION 49.—(a) COMMON START. The order of places, from left to right, shall be settled by draw. (Direction of the race).

(b) INDIVIDUAL START. Competitors shall leave at intervals which may vary from 30 seconds to 2 minutes.

1. They shall draw for places.

2. Competitors shall be grouped by the Technical Committee according to their qualifications (previous performances). The first group shall include the fastest racers, the second, the next best, and so on. The number of groups as well as the number of competitors in each group shall vary according to the races and the competitors.*

The groups shall be started in the order of their qualifications (beginning with the fastest group or the slowest group) or they shall draw for places for the start. The starting order of the competitors in each group is also settled by draw.

(c) GROUP STARTING. Competitors are arranged in groups, according to the above (see Section 49, b 2). Instead of starting individually, the competitors in each group start together. The various groups are started at intervals of 1 or 2 minutes.

(d) When a Downhill race is divided in two parts, the competitors shall be started in the same order and at the same intervals in the second part of the race as in the first part, or if the Technical Committee should so decide, in the order of the times made in the first part. In the latter case, the competitor having made the best time in the first part shall start first in the second part, and so on. The interval at the start between the first and the second competitor shall be equal to the difference in the time made by such first and second competitors in the first part.

The interval between starts for the remainder of the competitors shall be the same as the difference in the times made by the same competitors in the first part.

Any competitor arriving at the starting point after the time set for his start shall be timed from the time set for his start. For the recording of his time, the time of the regulation start shall be taken and not the time of his real start.

Any competitor making a false start shall be penalized by the addition of five seconds to his time. If he makes another false start he shall be disqualified

*Only a limited number of competitors from a country or a club shall be admitted. In races held under the auspices of the F.I.S., the number of competitors is limited to 6 per nation.

STANDING

SECTION 50.—Only the actual times made count in the standing of competitors in downhill races.

When a Downhill race is divided in two parts, the times made in the two parts of the race shall be added together for the standing of the competitors.

A Downhill race can only be interrupted when it would be impossible to finish it, owing to poor visibility, a snow storm or when an avalanche threatens. In this case, and if all competitors have not been started, the results shall be considered as null and void.

SLALOM RACES

In Slalom races, the course is marked by pairs of flags, each pair being of the same colour; only two colours should be used, and in alternate order.

The competitor shall follow the course as marked by the flags. Crossing through a pair of flags may be done from either side.

As a general rule, a Slalom race is run in two "halves" or parts, and the position of the flags in the second part may be changed by the chief of the course. Under exceptional circumstances, a Slalom may be run in one race only. In this case, the course must be comparatively longer.

The first part shall be opened by a qualified skier not entered in the competition. This regulation shall also apply to the second part if the position of the flags has been changed.

The chief of the course shall have the right to disqualify or eliminate, before the end of the race, the competitors who have not sufficient skill for negotiating the difficulties of the course, and who only damage the course and flags to the detriment of other competitors. The Technical Committee shall have the right to admit to the second part only a limited number of competitors, which number shall be published before the first part. In this case, the first part is considered as an elimination trial. For the final results, the times made by the competitors who are qualified for the second part shall be taken into account.

PREPARING A SLALOM RACE

SECTION 52.—The snow on the Slalom hill must be packed sufficiently hard so that a fall makes practically no holes. The chief of the course shall decide whether the snow is in a sufficiently hard condition. If snow falls during the race, the hill shall be packed again. Each flag-keeper shall be responsible for the condition and perfect maintenance of the part of the course of which he has charge during the whole of the race. He must fill the holes made immediately after the competitor has passed the last pair of flags under his care.

START

SECTION 53.—In the first half of the race, the order of the start shall be arranged by draw; in a combined race, however, it may be arranged according to the standing of the competitors in the Downhill race (see Section 57); in the second part of the race, the start shall again be made in the same order or in reverse order, according to the decision of the Technical Committee.

Each and every following competitor shall be started only when the competitor ahead of him has covered the whole of the Slalom course. Each competitor can take only one start in each part. The chief of the course may, however, authorize a new start for competitors who have been handicapped during the race by spectators or dogs, etc. Penalties already incurred by the competitor before the incident entitling him to a new start has taken place, shall be included in the new race.

A competitor making a false start shall be recalled.

RACE

SECTION 54.—Pairs of flags must be gone through in the proper order. To questions asked by a contestant, the flag-keeper shall answer only either "Come back" or "Go on." A competitor who has failed to pass through a pair of flags (disqualification, see Section 55, (c)) must be recalled by the flag-keeper by the words "Come back." The rest of the race shall be considered as void so long as he has not passed through the pair of flags that he has omitted. The order "Go on" applies for all other cases, even if the competitor should have incurred a single or double penalty. (See Section 55, (a) (b) and Section 37, (h)).

SCORING

SECTION 55.—As penalty for each fault, the following supplements are added to the time made by a competitor. When the Slalom race is run in two parts, the supplements shall be added to the result of each part. The supplements shall be added to the time of each part and not to the combined times of both parts.

(a) SINGLE SUPPLEMENT. If only one foot of the competitor crosses the line that must be crossed between the setting points of two flags, the following supplement shall be added:—

4 seconds—when the best time, without penalty, is 40 seconds or less; 4½ seconds—when the best time, without penalty, is from 40 1/10 seconds to 45 seconds; 5 seconds—when the best time, without penalty, is from 45 1/10 to 50 seconds; 5½ seconds—when the best time, without penalty, is from 50 1/10 to 55 seconds; 6 seconds—when the best time, without penalty, is from 55 1/10 seconds or more.

(b) DOUBLE SUPPLEMENT. If the line is not crossed by either foot of the competitor, but if it is crossed by any part of his ski between the two flags to be passed, the single supplement shall be counted twice.

(c) DISQUALIFICATION. If the line between the two flags to be passed is not crossed either by both feet or by any part of a ski, the competitor shall be disqualified.

(d) STANDING. The standing of competitors is based on the addition of the times made in the two parts, including the supplements to be added if necessary to the time made in one part. The official record must show the times made in the first and second parts, with supplements added, and the final time.

Section 56.—A Slalom Race can only be stopped when the visibility has become so poor that racers are unable to see from one pair of flags to another or when a snow storm makes it impossible to finish the race.

If it should be impossible to finish a Slalom race on the same day, the results of the first part, if it has been completed, shall count for the standing of competitors.

If the first part has not been completed, all results are null and void.

D. COMBINED DOWNHILL AND SLALOM RACES

GENERAL REGULATIONS

SECTION 57.—In combined races, the performances of the competitors in the Downhill as well as in the Slalom race, shall be taken into account.

The Downhill race may, at the same time, serve as an elimination trial for the Slalom race. The number of competitors admitted to the Slalom is determined and announced by the Technical Committee before the Downhill race.

The order of the start in the Slalom race may be decided by the standing of the competitors in the Downhill race; in this case, the winner of the Downhill race is started first in the Slalom race.

Downhill and Slalom races shall be held according to the regulations laid for each of those contests.

In a combined race, at least a part of the Downhill course (if it is run in two parts) and a part of the Slalom race must have been completed before the results for the combined races can be considered.

$$\text{Note (x) : } \frac{\text{Best Time (T)}}{\text{Time Made (T)}} \times 100.$$

The times are read with the help of the conversion tables (Annex VI) in fractions of minutes, and later converted into points with the help of logarithm tables (Annex VII).

If logarithm tables are not used, the points are figured to three decimals and rounded off over or under to two decimals (0.005 : 0.01 : 0.004 : 0.00).

The standing of the competitors in the combined race is determined by the total number of points obtained in the Downhill race and in the Slalom race, divided by two.

In case of a tie for several competitors, the final standing in a combined race shall be determined by the standing in the Downhill race.

E. TEAM RACES

GENERAL REGULATIONS

SECTION 59.—Team races may be arranged for Downhill races or Slalom races or for both combined. In a combined race, the same teams must start in both contests. No change in the composition of the teams shall be allowed unless one of the team members is prevented from starting by accident, illness or other serious reason. No change can be made without the consent of the President of the Technical Committee.

The number of competitors in a team may be limited by the organization committee in the announcement for the race. The poorest individual time in any team shall not be included in the score, and no individual time, made by any member of a team, shall be reckoned if it is more than twice as long as the time made by the best competitor on that particular team.

ORDER OF THE START

SECTION 60.—The captains of the various teams shall draw lots for the start. They shall decide the order in which the members of their teams shall start as well as the composition of their team.

Assuming that three teams A, B, C, are to be started, and that team A has drawn number one, team B number two and team C number three, the order of the start shall be as follows:—A1, B1, C1; B2, C2, A2; C3, A3, B3; A4, B4, C4, etc.

SCORING

SECTION 61.—In Downhill and Slalom races, the times made by the members of the same team (with the exception of the competitor placed last in each team, see Section 59) shall be added, together, and the sum total gives the standing of the team. If two or several teams are tied, then these teams shall be placed according to the best individual times made by their members.

In the combined race by teams, the score of the teams shall be computed in the different tests as shown in the previous paragraph. In each test, the best team obtains 100 points; the score of the following teams is figured as in the individual races (see Section 51). The total points made by each team in the various tests is divided by the number of these tests. The figure thus obtained represents the final score.

If two or several teams obtain the same final score, the team making the best individual time in the Downhill race shall be placed first. If the individual results in a Downhill race should be practically equal, when figured out to the decimals, the teams shall be considered ex-aequo.