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(54) **SHOOTING TRAINING AND COMPETITION**

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Description

TECHNICAL FIELD

[0001] This invention relates to shooting training. It is particularly concerned with the training of individuals in, and competition involving, clay pigeon shooting.

[0002] It is a characteristic of clay pigeon shooting that in the course of a series of shots a succession of clay pigeon targets, each referred to as a 'clay', are directed each at a different direction and/or speed relative to the shooter. The shooter needs to have, or be able to acquire, the skill to take into account of speed and direction of each clay pigeon target so as to optimise the chance of hitting the clay. The skill has to be exercised in the period between the clay coming into sight and the time the shooter fires their gun. In broad terms it is regarded as being easier to hit a clay crossing the field of view of the shooter rather than one moving towards or away from shooter.

[0003] In GB Patent Application 2 281 516 (Urban Pitch Products hereafter 'UPP') there is disclosed a shooting facility comprising a support surface for supporting one or more participants during shooting and defining one or more shooting stations from which the participants may shoot, a first trap means located substantially directly below the support surface and a second trap means located directly above the support surface, the first and second trap means each being adapted to project target objects into the air in order to be shot at by participants. The UPP disclosure provides for a relatively self contained shooting facility which can be transported as a trailer unit and used for entertainment or competitive purposes. Effectively the UPP facility provides a support surface in the form of a gallery to be mounted by the participant or participants together with traps located above and below the gallery. However the UPP facility only enables a shooter on the gallery to be provided with a target moving away from them. This provides for little lateral movement of a launched clay relative to the shooter as the clay necessarily follows a path from a location either above or beneath the shooter rather than from a position well to the side. Consequently a shooter has mainly to direct his aim to take account of vertical movement of the clay.

[0004] In order to train a shooter it is necessary to provide for all possible types of movement comparable with the flight of a game bird. Such movement can occur away from the shooter but also towards them and transverse their line of sight.

DISCLOSURE OF INVENTION

[0005] According to the present invention there is provided a training method for clay pigeon shooting wherein a shooting position is provided from which a shooter can direct a pair of shots in succession across a shooting area towards a clay pigeon released from a trap at a

specific location relative to the area to follow a given path across the area characterised by the steps of:

1 providing relative to a shooting position (12,12') and to area (11) a plurality of traps (T1 to T7. T1' to T7') each trap in the plurality providing a unique coloured clay corresponding to the colour of the sequence of balls used in the game of snooker namely (from lowest scoring to highest: red, yellow, green, brown, blue, pink and black) and the launchers in the plurality serve to provide for corresponding difficulty of path to the colour of the sequence of clays used namely from easiest (red) to most difficult (black) for the launch of a clay along a path (P1 to P7, P1' to P7') providing a unique degree of difficulty as a target for a shooter (13,13') at the shooting position (12, 12');
2 locating a shooter (13,13') at the shooting position (12,12');
3 selecting a pair of launchers (T1 to T7, T1' to T7') from which target clays are to be launched at call;
4 causing the first launcher and second launcher of the selected pair to launch, respectively, their distinguishable clays;
5 causing the shooter (13,13') to fire a first shot of a pair at the distinguishable clay from the first launcher of the pair and, in the event the clay from the first launcher is hit, causing the shooter to fire a second shot of the pair at the distinguishable clay from the second launcher;
6 in the event that the first and second clays are hit repeating steps 3 to 5 either for the given pair of launchers or from another pair of launchers until a predetermined number of clays have been discharged from some or all of the launchers or all the discharged clays have been hit or according to some other criteria.

[0006] According to a first preferred version of the present invention the training method is further characterised in that, at least during a first sequence of firing, the first launcher of the pair is always the same so that, at least during the first sequence, the first distinguishable clay in any given pair of discharged clays is always the same.

BRIEF DESCRIPTION OF DRAWINGS

[0007] Exemplary embodiments of the invention will now be described with reference to the accompanying drawings of clay pigeon shooting areas of which:

Figure 1 is a plan view of a first embodiment; and
Figure 2 is a side elevation in direction II in Figure 1;
Figure 3 is a plan view of a second embodiment.

MODES FOR CARRYING OUT THE INVENTION

[0008] Figures 1 and 2

A clay pigeon shooting area with boundary 11 has a position 12 for a shooter 13. Path A extends through position 12 and across the area 11. In general terms it is found that a clay following a trajectory across line of sight in direction D of the shooter 13 is more readily hit by shooter 13 than a clay following a trajectory towards or away from the shooter 13.

[0009] A plurality of seven remotely operable clay pigeon launchers are provided namely launchers T1 to T7 spaced about the area 11. The launchers are not visible from the position 12 but serve to provide for the projection of clays along the paths P1 and paths P2 to P7 shown in Figure 2 extending from, respectively, their corresponding launchers T1 to T7. Each launcher T1 to T7 is equipped with a magazine for clays and an operating system so that once a clay is fired from the launcher a fresh clay is loaded. Each launcher has in its magazine a set of coloured clays, the clays in a given magazine being of a colour unique to that launcher so that once a clay is launched into the firing area the shooter will be able to identify the launcher from which it comes. The launchers T1 to T7 are operated remotely from a central control position 15 which is occupied by a trainer 16 who also keeps the score of a shooter. The control position 15 includes equipment 17 linked to the launchers L1 to L7 whereby trainer 16 can cause a launcher or any combination of launchers P1 to P7 (usually not more than two) to discharge a clay along the path associated with the launcher. The discharges can either be simultaneous or separated by a pre-determined time interval.

[0010] Figure 3 shows a more elaborate layout for use when a greater area of land is available. Items of similar form and function in Figure 3 to those in Figures 1 and 2 are given similar reference references but with the addition of an apostrophe (').

[0011] Launcher T1' is in a similar relative position to the shooter 13' as launcher T1 to shooter 13 in Figure 1. However the remaining launchers T2' to T7' are laid on either side of the frontage of the shooter 13' to provide a wider range of possible trajectories for clays in contrast to the linear layout of launchers described in connection with Figures 1 and 2. As in the case of the embodiment of Figures 1 and 2 the launchers T1' to T7' have magazines loaded with coloured clays unique identifying the launcher from which the clay is projected.

[0012] The training system used in the case of both embodiments is based on the game of table snooker. A characteristic of table snooker is that a player on potting a red ball (scoring 1 point) is entitled thereafter to attempt to pot a ball of a colour other than red. The colours of the balls other than red score the following points: black 7, pink 6, blue 5, brown 4, green 3 and yellow 2. On starting there are initially ten red balls and until all these have been potted every time a differently coloured

ball to red is potted it is replaced on a particular location on the table to enable it to be used for further scoring.

[0013] To reflect the requirement in table snooker to first pot a red ball before being able to score further points by potting another colour in the shooting version the launcher T1 (T1') has a magazine filled with red coloured clays and the path P1 (P1') is diagonally across the field of view of the shooter 13 (13') and at a relatively short distance from the shooting position 12 (12'). The path P1 (P1') represents the path for a clay which is most readily hit by a shooter 13 (13').

[0014] The remaining paths P2 to P7 (P2' to P7') provide progressively more difficult paths for a clay to be hit by shooter 13. The clays of launchers L2 to L7 (L2' to L7') are coloured respectively yellow (scoring 2), green (3), brown (4), blue (5), pink (6) and black (7).

[0015] During the opening phase of the training clays are launched in pairs. The first is always from launcher T1 (T1') and so is red. The second is selected by the trainer but will usually be from one of the higher value launchers T2 to T7 (T2' to T7'). The interval between the launch of the first and second clays of the pair is regulated by the trainer but for a reasonably experienced shooter they will be launched simultaneously. In any event the shooter will be aware of the trajectory of the red clay and can consequently anticipate its trajectory so as to be able to fire and hit the red clay while evaluating the path of the second clay. The red clay must be hit before the shooter can attempt to hit the second clay. The colour of the second clay will convey to the shooter the likely trajectory or at least the relative difficulty of the shot. The behaviour, movements and action of the shooter 13 (13') is clearly observable by the trainer 15 (15') so enabling the trainer to provide the appropriate instructions and advice in any given circumstance. By selecting appropriate pairs of clay launchers the trainer 15 (15') ensures that the shooter 13 (13') is subjected to an appropriate sequence of actions to build up the shooter's confidence. Typically inexperienced shooters can be trained to deal with clays following more difficult trajectories.

[0016] It is possible to introduce into the shooting scheme an event occurring in a table game of snooker. The event arises when one player finishes their turn so as to leave the cue ball in such a position that his opponent cannot play the cue ball directly at the next legal target ball so as to hit it without striking another ball of incorrect colour. In this position the second player is referred to as being 'snookered'. To escape from being snookered the second player has to strike the cue ball in such a way that it does eventually hit the correct ball without first striking an inappropriate ball. This can be achieved either by striking the cue ball in such a way that it swerves to avoid an intervening ball of incorrect colour on its way to striking the correct target ball. Alternatively the player can strike the cue ball to cause it to follow a path of more than one stage involving bouncing off one or more cushions before striking the correct ball

without striking any other ball on the way. In the event that the second player fails to hit the appropriate ball with the cue ball then penalties arise including a re-taking of the shot and/or a loss of points.

[0017] For a corresponding hazard in the shooting version in which two shooters or teams of shooters are in competition with each other it is envisaged that a snookering position can be generated by enabling a first shooter to call for a 'snooker' clay to be fired from a specially selected launcher.

[0018] In the event the first shooter hits the clay with the first of his two shots then the second player must hit their next clay with his first shot. In the event the second player does not score a hit with his first shot then the second player incurs a penalty (typically a loss of points as in the table game).

[0019] In the event the first shooter only hits the snooker clay with the second of his two shots then the second shooter has two shots in which to hit the next clay. If the second shooter does hit the clay with one of his two shots then the second shooter is regarded as having got out of the snookered position. If the second shooter misses with both shots then the second player incurs a penalty.

INDUSTRIAL APPLICABILITY

[0020] The training provided by the present invention facilitates the training of shooters and also serves to provide a number of competitive opportunities for shooters of any degree of skill or experience with an opportunity to win prizes or achieve recognised standards.

[0021] In particular a tyro shooter aware of the characteristic colours and scoring of a universally played game such as snooker can readily concentrate on the required actions for shooting while readily appreciating the significance of his scores over an extended period. It also enable a new comer to clay pigeon shooting to soon establish what paths provide the greatest difficulty by relating them to a particular colour and enable him to consider why for them clays on some trajectories are more readily dealt with than others. This will enable the shooter to consider the development of their skills on their own account in addition to during sessions under training.

[0022] The exemplary embodiments refers to the use of the invention in relating to training. A competitive element can be introduced by having a two or more shooters each in turn endeavouring to score more or more quickly or in some other quantitative way to a greater extent than another.

Claims

1. A training method for clay pigeon shooting wherein a shooting position is provided from which a shooter can direct a pair of shots in succession across a

shooting area towards a clay pigeon released from a trap at a specific location relative to the area to follow a given path across the area **characterised by** the steps of:

- 1 providing relative to a shooting position (12,12') and to the area (11) a plurality of traps (T1 to T7, T1' to T7') each trap in the plurality providing a unique coloured clay corresponding to the colour of the sequence of balls used in the game of snooker namely from lowest scoring to highest: red, yellow, green, brown, blue, pink and black and the launchers in the plurality serve to provide for corresponding difficulty of path to the colour of the sequence of clays used namely from easiest, red, to most difficult, black, for the launch of a clay along a path (P1 to P7, P1' to P7') providing a unique degree of difficulty as a target for a shooter (13,13') at the shooting position (12,12');
2 locating a shooter (13,13') at the shooting position (12,12');
3 selecting a pair of launchers (T1 to T7, T1' to T7') from which target clays are to be launched at call;
4 causing the first launcher and second launcher of the selected pair to launch, respectively, their distinguishable clays;
5 causing the shooter (13,13') to fire a first shot of a pair at the distinguishable clay from the first launcher of the pair and, in the event the clay from the first launcher is hit, causing the shooter to fire a second shot of the pair at the distinguishable clay from the second launcher;
6 in the event that the first and second clays are hit repeating steps 3 to 5 either for the given pair of launchers or from another pair of launchers until a predetermined number of clays have been discharged from some or all of the launchers or all the discharged clays have been hit or according to some other criteria.
2. A training method as claimed in Claim 1 **characterised in that**, at least during a first sequence of firing, the first launcher of the pair is always the same so that, at least during the first sequence, the first distinguishable clay in any given pair of discharged clays is always the same.

Patentansprüche

1. Trainingsverfahren für das Tontauben-Schießen, bei dem eine Schießposition vorgesehen ist, von der aus ein Schütze ein Paar Schüsse nacheinander über einen Schießbereich in Richtung auf eine Tontaupe richten kann, die aus einer Klappe an ei-

nem bestimmten Ort relativ zu dem Bereich freigesetzt wird, um einer bestimmten Bahn über den Bereich zu folgen,

gekennzeichnet durch folgende Schritte:

1. Bereitstellen einer Mehrzahl von Klappen (T1 bis T7, T1' bis T7') relativ zu einer Schießposition (12, 12') und zu dem Bereich (11), wobei jede Klappe in der Mehrzahl eine einzigartige, farbige Tontaube entsprechend der Farbe der Abfolge von Kugeln vorsieht, wie sie beim Billardspiel verwendet werden, nämlich von der niedrigsten Punktzahl zu der höchsten: rot, gelb, grün, braun, blau, pink und schwarz, und wobei die in Mehrzahl vorhandenen Abschusseinrichtungen dazu dienen, für eine Bahnschwierigkeit entsprechend der Farbe der Abfolge der verwendeten Tontauben zu sorgen, nämlich von der einfachsten, rot, zu der schwierigsten, schwarz, für den Abschuss einer Tontaube entlang einer Bahn (P1 bis P7, P1' bis P7') unter Schaffung eines einzigartigen Schwierigkeitsgrades als Ziel für einen Schützen (13, 13') in der Schießposition (12, 12');
 2. Positionieren eines Schützen (13, 13') in der Schießposition (12, 12');
 3. Auswählen eines Paares von Abschusseinrichtungen (T1 bis T7, T1' bis T7'), aus denen Ziel-Tonscheiben auf Zuruf abzuschießen sind;
 4. Veranlassen der ersten Abschusseinrichtung und der zweiten Abschusseinrichtung des ausgewählten Paares zum jeweiligen Abschießen ihrer zu unterscheidenden Tonscheiben;
 5. Veranlassen des Schützen (13, 13') zum Abfeuern eines ersten Schusses eines Paares auf die zu unterscheidende Tonscheibe aus der ersten Abschusseinrichtung des Paares und, wenn die Tonscheibe aus der ersten Abschusseinrichtung getroffen wird, Veranlassen des Schützen zum Abfeuern eines zweiten Schusses des Paares auf die zu unterscheidende Tonscheibe aus der zweiten Abschusseinrichtung;
 6. wenn die erste und die zweite Tonscheibe getroffen werden, Wiederholen der Schritte 3. bis 5. entweder für das gegebene Paar von Abschusseinrichtungen oder aus einem anderen Paar von Abschusseinrichtungen, bis eine vorbestimmte Anzahl von Tonscheiben aus einigen oder allen Abschusseinrichtungen abgeschossen worden sind oder alle der abgeschossenen Tonscheiben getroffen worden sind oder irgendein anderes Kriterium erfüllt ist.
2. Trainingsverfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** wenigstens während einer ersten Sequenz des Abfeuerns die erste Abschusseinrichtung des Paares stets die gleiche

ist, so dass wenigstens während der ersten Sequenz die erste zu unterscheidende Tonscheibe in einem beliebigen gegebenen Paar von abgeschossenen Tonscheiben stets die gleiche ist.

Revendications

1. Procédé d'entraînement pour le tir aux pigeons d'argile dans lequel une position de tir est fournie, à partir de laquelle un tireur peut diriger une paire de tirs successifs à travers une zone de tir vers un pigeon d'argile libéré par un appareil de lancement à un endroit spécifique par rapport à la zone pour suivre une trajectoire donnée à travers la zone, **caractérisé par** les étapes suivantes :

1. fournir une pluralité d'appareils de lancement (T1 à T7. T1' à T7') par rapport à une position de tir (12, 12') et à la zone (11), chaque appareil de lancement de ladite pluralité fournissant un pigeon d'argile d'une couleur unique correspondant à la couleur de la séquence de boules utilisées pour le jeu de snooker, c'est-à-dire de la marque la plus basse jusqu'à la plus haute, rouge, jaune, vert, marron, bleu, rose et noir et les lanceurs de ladite pluralité servant à fournir une difficulté de trajectoire correspondant à la couleur de la séquence de pigeons d'argile utilisés, c'est-à-dire de la plus facile, rouge, à la plus difficile, noir, pour le lancement d'un pigeon d'argile le long d'une trajectoire (P1 à P7, P1' à P7') fournissant un degré de difficulté unique comme cible pour un tireur (13, 13') en position de tir (12, 12');
2. localiser un tireur (13, 13') en position de tir (12, 12');
3. sélectionner une paire de lanceurs (T1 à T7, T1' à T7') à partir de laquelle les cibles d'argile doivent être lancées sur un appel;
4. faire lancer leurs pigeons d'argile discernables respectivement au premier lanceur et au deuxième lanceur de la paire sélectionnée;
5. faire tirer au tireur (13, 13') un premier coup d'une paire en direction du pigeon d'argile discernable à partir du premier lanceur de la paire et, au cas où le pigeon d'argile du premier lanceur serait touché, faire tirer au tireur un deuxième coup de la paire en direction du pigeon d'argile discernable à partir du deuxième lanceur;
6. au cas où le premier et le deuxième pigeons d'argile seraient touchés, répéter les étapes 3 à 5 soit pour la paire donnée de lanceurs soit à partir d'une autre paire de lanceurs jusqu'à ce qu'un nombre prédéterminé de pigeons d'argile ait été envoyé à partir de quelques-uns des ou de tous les lanceurs ou jusqu'à ce que tous les

pigeons d'argile aient été touchés ou en fonction d'autres critères.

2. Procédé d'entraînement selon la revendication 1, **caractérisé en ce que**, au moins pendant une première séquence de tir, le premier lanceur de la paire est toujours le même de façon à ce que, au moins pendant la première séquence, le premier pigeon d'argile discernable dans n'importe quelle paire de pigeons d'argile envoyés soit toujours le même.

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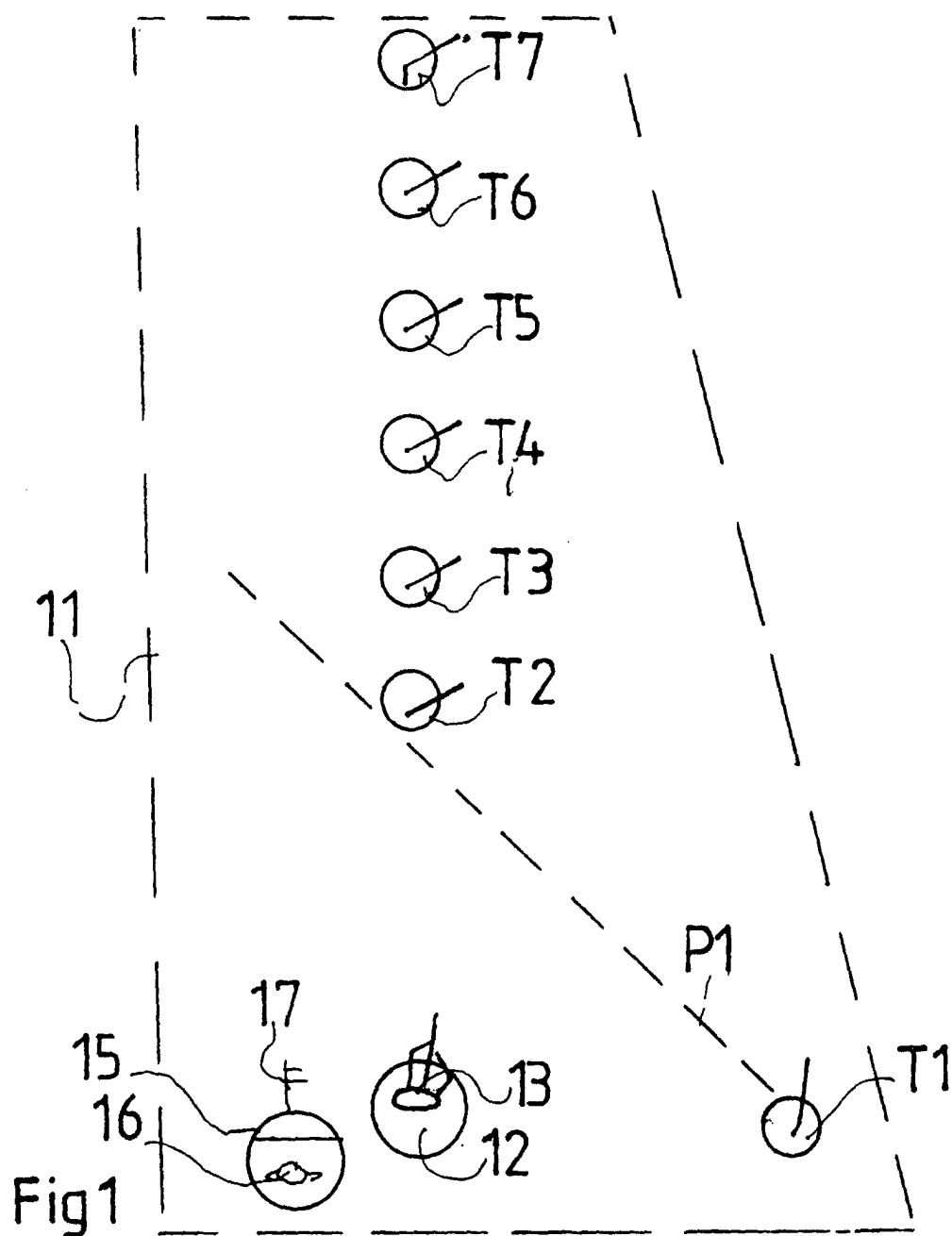
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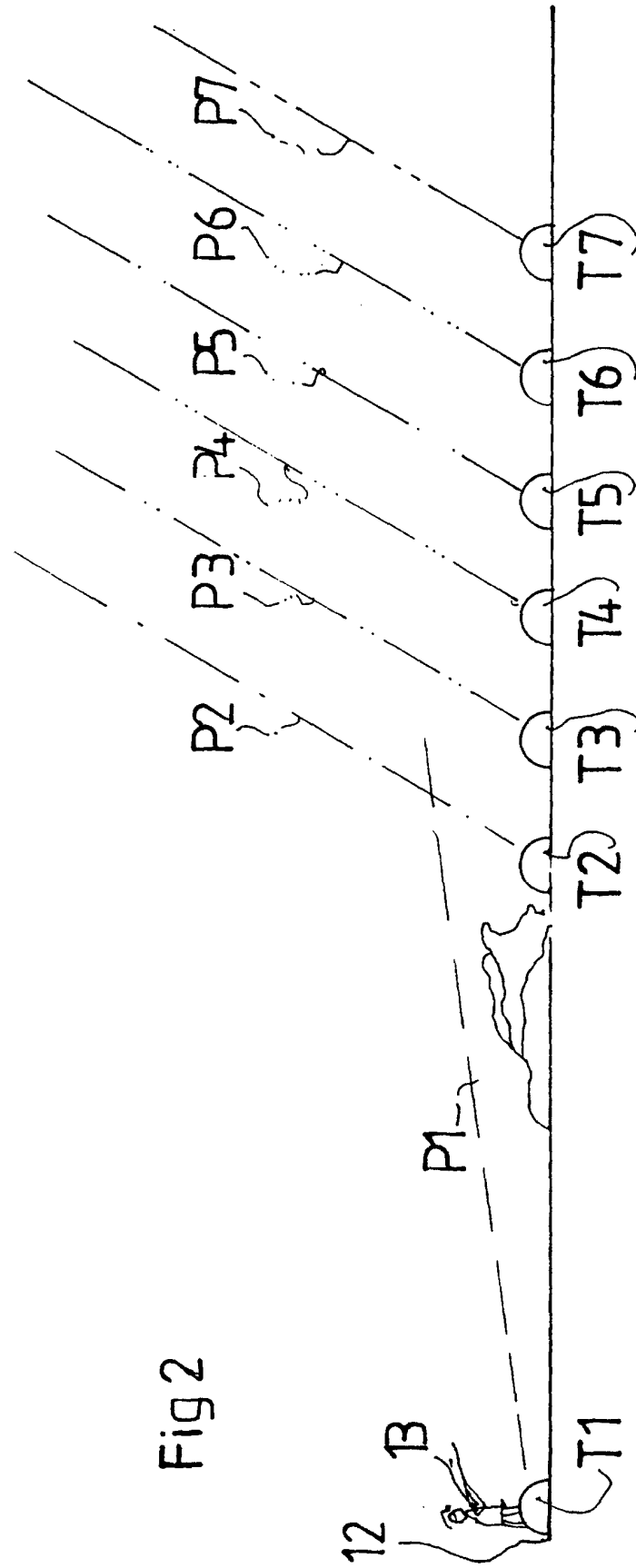


Fig 2

