May 13, 1958 P. M. OSMUN 2,834,604

SKIER'S SEAT AND SUPPORTING MEANS THEREFOR

Filed Sept. 24, 1954

2 Sheets-Sheet 1

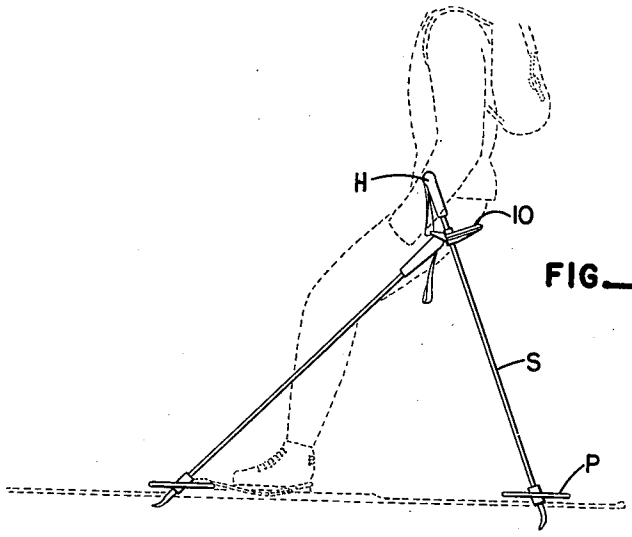
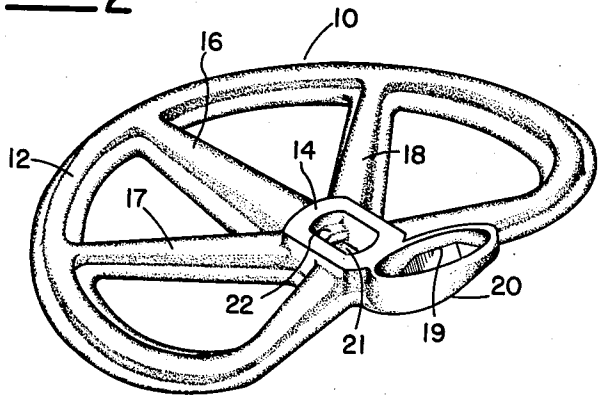


FIG. 1

FIG. 2



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2 Sheets-Sheet 2

FIG. 6

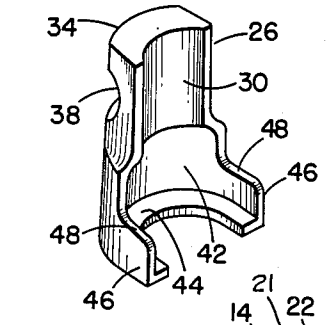


FIG. 7

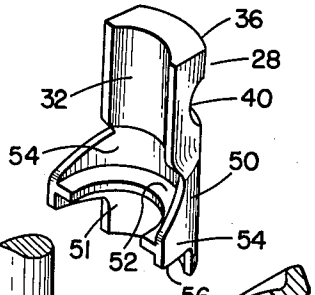


FIG. 3

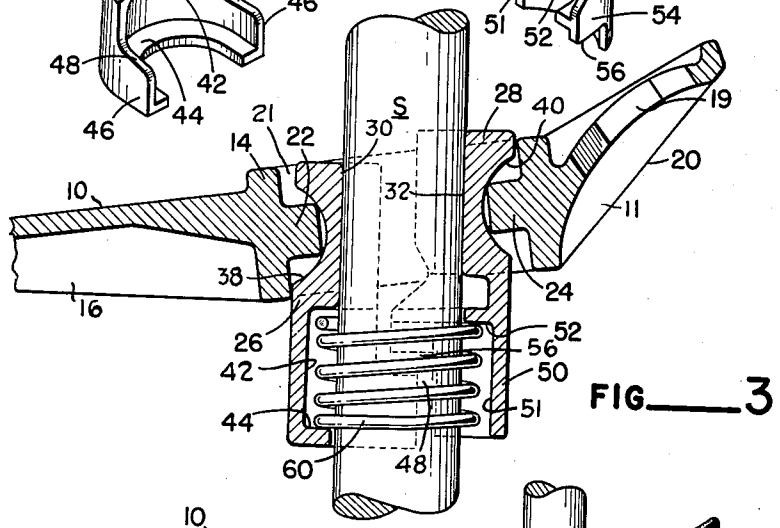


FIG. 4

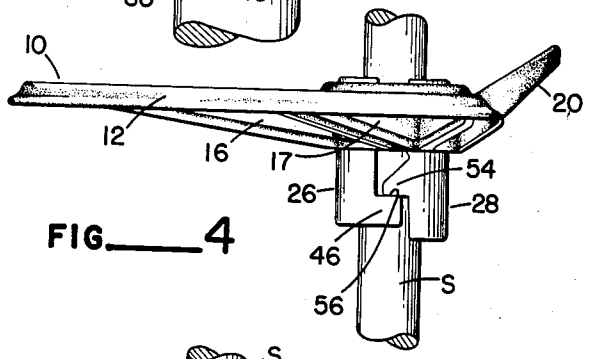
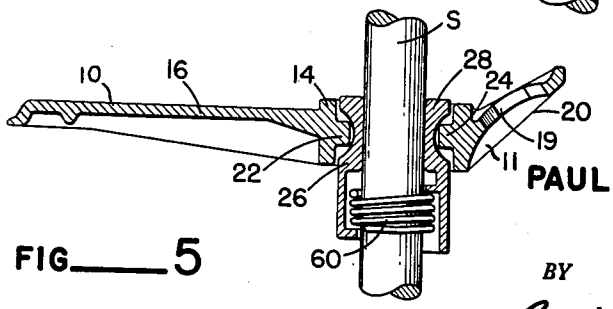


FIG. 5



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SKIER'S SEAT AND SUPPORTING MEANS THEREFOR

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7 Claims. (Cl. 280—11.37)

This present invention consists of a seat member adapted for longitudinal movement upon one of a pair of ski poles and having means whereby the seat member may be secured near the upper end of the ski pole when the seat is put into use. Means are provided whereby the seat, when it is not in use, will overlie the snow pad or ring of the ski pole which it resembles and be held in the abutting relationship thereto. The second ski pole of the pair, provided with the usual grip, when properly positioned, will engage the rest portion of the seat in a manner to support it and the first ski pole and give rigidity to the skier's seat when in use. Both ski poles are disposed in a vertical plane substantially parallel to the longitudinal axis of the skis when in use.

The present day skier normally employs special shoes for use in his sport, and these shoes are clamped or otherwise secured to the ski in a manner to maintain at all times the axis of the shoe substantially parallel to the axis of the ski in order that he may have full control of the ski when in use. Such an arrangement makes it very inconvenient for the skier to rest, especially in a sitting position. The desirability of providing some form of seat for skiers has been well recognized and a large number of different inventors have approached this problem from many different points of view. Their constructions are widely varied and do not seem to provide a very practical solution of the problem. Too often the equipment provides an inadequate seat, or the seating means so encumbers the ski poles as to render them clumsy in use, and many times the added material greatly increases the danger to the skier in case of the falls, which are so common in this sport. Other inventors have approached the problem from the standpoint of an attachment that is carried by the skier and put into use by applying it to the ski poles. This is very undesirable in that the average skier, encumbered as he is with his skis, his heavy boots, and binding means, habitually dresses very lightly, and any attachments for the providing of a seat are bulky and difficult for him to carry about, and too often, again, it increases the danger of injury should he fall on these detached members. After a careful study of many of the devices that are now available to skiers, it is believed that this present invention overcomes to a large degree the deficiencies noted and provides a very lightweight ski seat that is adequate for the purpose, is very stable when put into use, and can be transported very conveniently as part of the ski poles without encumbering them to the extent that would make them unwieldy.

The principal object of this present invention therefore is to provide a skier's seat and supporting means therefor which are incorporated as fixtures on the ski poles and used without detracting from the general utility of the ski poles themselves.

A further object of my invention is to provide a skier's seat slidably mounted upon a ski pole with means to effectively secure the seat in using position on the ski

pole, and during periods when it is not used, to provide for securing the seat in intimate association with the ordinary snow pad of the ski pole so that the same is entirely out of the skier's way.

A further object of this invention is to provide means which permits the effective association of the two ski poles forming a pair to the end that the same will provide a very stable support for the ski seat in the fore and aft plane.

A further object of this invention is to provide a skier's seat and supporting means therefor in such a form that the same may be transported easily and safely by the skier as part of the poles themselves and can be put into use very quickly when a seat is desired during a resting period.

Further objects, advantages and capabilities will be apparent from the description and disclosure in the drawings, or may be comprehended or are inherent in the device.

In the drawings:

Figure 1 is a perspective view showing a ski pole with my ski seat substantially in its position of use;

Figure 2 is a perspective view of the seat member itself showing the same as viewed from the top;

Figure 3 is a fragmentary, vertical sectional view through the hub of my seat and particularly showing the locking means as applied to the ski pole by a user's weight;

Figure 4 is a vertical side view of my device as applied to a ski pole;

Figure 5 is a view similar to Figure 4 excepting showing the same in cross-section and showing the same without weight applied to the seat as distinct from the showing of Figure 3; and

Figures 6 and 7 are perspective views respectively of the two members which coact to form the clamping, positioning and securing means by which my seat is secured to the ski pole.

Referring more particularly to the disclosure in the drawings, the numeral **10** designates generally the seat member proper. This I normally prefer to form of cast or molded material to the end that light weight can be achieved while retaining adequate strength to fully support the skier. Of the materials currently available the light weight magnesium alloys are to be preferred. However certain of the plastics can be molded very thin and due to the semi-tubular cross sections of the various portions of the seat, molded, possibly reinforced plastics are suitable.

It is necessary that the weight supporting portion be largely on one side of the hub member and to this end the rim portion **12** extends around substantially one-half of the circle. This insures the proper positioning of the skier's weight so that the locking means can be depended upon for certain operation. At its two ends rim **12** swings in to join with hub **14** and a plurality of reinforcing spoke-like webs **16**, **17**, and **18** further join the rim **12** and hub **14**. These spokes are preferably given considerable traverse extent because they, together with the wide semi-tubular rim, provide the seat and considerable area is desirable in order that the seat be comfortable in use.

Secured to hub **14** is the pole rest member **20**. This member is angularly disposed as will be noted in the principal views so that it will adequately engage the conventional handle disposed at the end of a ski pole. It is to be noted that it is provided with a seat **11** of semi-spherical form so that it will engage the end of the ski pole grip and tend to center the same and provide against slippage when the equipment is in use. To further bind the pole handle and prevent it tending to revolve, the bottom of the spherical seat **11** is provided with a through opening **19** having, preferably, six equal faces, similar

to a hexagon wrench. The edges of hexagonal opening 19 biting into the pole handle resist rotation of the same.

Hub 14 is provided with a generally rectangular through opening 21. Within opening 21 are provided diametrically opposed and inwardly extending lugs 22 and 24 which are disposed in each end of the rectangular openings 21. The function of these lugs will probably be best understood by a study of Figures 3 and 5. Operatively disposed within opening 21 and in engagement respectively with lugs 22 and 24 are the rear locking member 26 and the front locking member 28.

Members 26 and 28 are each provided with portions of cylindrical shape to form a snug engagement with the shaft S of the ski pole. These surfaces are indicated at 30 and 32 in Figures 6 and 7 respectively. The body of each of these locking members extends upwardly and terminates in the rather substantial peripheral bearing surfaces 34 and 36 respectively. Disposed immediately below these bearing surfaces are arcuate seats 38 and 40 adapted to engage respectively lugs 22 and 24. Clamp member 26 is provided at its lower extremity with an enlarged semi-circular recess 42 adapted to receive a locking spring 60. At the extreme lower end of surface 42 is a spring-retaining ledge 44. This ledge is reinforced by side extensions as 46 which in addition to providing strength to ledge 44 form on their upper surfaces the cam surfaces 48.

The front lock member 28 has the contact bearing portion 36 and immediately below it the arcuate groove 40 adapted to engage lug 24 of the seat proper. This clamp member which coacts with clamp member 26 has certain parts in common with it such as the cylindrical portion 32 which like surface 30 of lock member 26 is adapted to closely engage the shaft S of the ski pole. Below surface 36 and formed with a semi-circular cross section is the skirt member 50. The inner surface provides the other portion of a cylindrical container which together with the surface 42 tends to more or less fully enclose the lock actuating spring. Within the cylindrical surface 51 is disposed an inwardly extending semi-circular ledge 52 which functions similarly to ledge 24 of member 26 excepting that it is adapted to receive the locking spring on its lower surface. This relationship will be understood by a study of Figure 3. The skirting 54 is carried slightly past a diameter passing through the center of shaft S and this skirting forms an added support for ledge 52 and it also provides the cam surfaces or rest members 56 which operatively engage cam surfaces 48 of member 26. Skirting 46 of member 26, skirting 54 of clamp member 28, form substantially an enclosure for the locking spring 60 which encircles shaft S and engages the upper side of ledge 44 and the under side of ledge 52.

Method of operation

My ski pole seat is normally carried on the pole near the pad P at the lower end and because of its structure assumes the position shown in Figure 3. Spring 60 exerts a downward force on shoulder 44 and an upward pressure on shoulder 52. This force is transferred to locking members 26 and 28 respectively and they tend to move longitudinally along pole S. The grooves 38 and 40 in which ride the shoulders 22 and 24 cause the seat 10 to tip since one side is forced up and the other down. With this tipping action which throws the seat out of a plane normal to the longitudinal axis of the ski pole, the shoulders 22 and 24 are brought closer to the ski pole. These shoulders in turn exert an inward pressure on the grooves 38 and 40 in which they are positioned which causes the inner surfaces 30 and 32 to grip the ski pole S.

When the skier is desirous of using my invention he need exert very little effort to do so. By holding the handle H of the ski pole on which the seat 10 is affixed, the user grips the ring 12 near the center spoke 16 and exerts a lifting pressure. Through an action similar to that previously described, this lift brings the seat 10 to

a plane normal to the axis of pole S. This brings the locking member 26 up and the locking member 28 down, compressing the spring 60 so that the top edges 48 of arms 46 contact the edges 56 of arms 54 preventing the seat from going beyond the plane perpendicular to the pole. Now the camming action has been relieved, and no further engagement with the pole exists so that seat is free to slide up on the pole to any point desired. When the user releases his grip upon the seat, the spring 60 causes engagement with the pole as previously described.

The skier now straddles the pole and placing the handle of the other pole in the cup portion 20 he lowers his weight onto the seat. With the points of the ski poles in the snow between the skis, and spaced apart one from the other, no longitudinal movement of the seat 10 with respect to the skis and the skier is possible. Now the weight of the skier upon the seat, and the pressure exerted upward upon the cup 20 causes the cam blocks 26 and 28 to grip the ski pole solidly and will more than hold the skier's complete weight. The skier places the bulk of his weight on the seat and only exerts enough pressure on his legs to keep from tipping sideways.

It is believed that it will be clearly apparent from the above description and the disclosure in the drawings that the invention comprehends a novel construction of a skier's seat and supporting means therefor.

Having thus disclosed the invention, I claim:

1. A skier's seat and supporting means therefor, comprising: a pair of ski poles each having a shaft portion; a seat member formed of light-weight, rigid material positioned on the shaft portion of a first of said poles and slidable thereon, said seat member including a hub and a series of spokes radiating therefrom and a rim joining said spoke and encircling approximately 180 degrees of said hub on the rear side thereof, a pole end rest member extending from the front side of said hub opposite said rim and upwardly tilted with respect to said spokes and having a generally semi-spherical depression in its under surface adapted to engage the upper end of the second ski pole, said hub having a generally rectangular through opening in which said first pole is positioned and diametrically opposed outstanding lugs in corresponding ends of said opening, a rear and a forward locking member positioned in said corresponding ends of said opening and having arcuate horizontal grooves in their exterior surfaces in which said lugs are loosely positioned, said locking members having opposed cylindrical surfaces on their inner sides at the level of said grooves adapted to closely fit said first pole and said lugs and grooves being disposed to fixedly clamp said cylindrical surfaces on said first pole when said seat member is tilted when supporting the weight of the user seated thereon.

2. The subject matter of claim 1 in which there is a spring encircling said shaft portion of said first pole and said locking members having opposed recesses on their interior surfaces in which said spring is positioned and an upper inwardly-extending ledge on said forward locking member and a lower inwardiy-extending ledge on said rear locking member bordering said recesses and said spring bearing on the under side of said upper ledge and on the upper surface of said lower ledge and biasing said locking members to a normal shaft clamping position with said rim tilted downwardly providing means securing said seat member in position without the employment of a weight thereon.

3. A skier's seat member, comprising: a seat member adapted to be positioned on a shaft and slidable thereon, said seat member including a hub and a series of spokes radiating therefrom and a rim joining said spokes and encircling at least approximately half of the periphery of said hub, said hub having a through opening in which said shaft is positioned and opposed outstanding lugs in opposite sides of said opening, a first and a second locking member positioned in said opposite sides of

said opening and having horizontal grooves in their exterior surfaces in which said lugs are loosely positioned, said locking members having opposed surfaces on their inner sides at the level of said grooves adapted to closely fit said shaft and said lugs and grooves being disposed to fixedly clamp said opposed surfaces on said shaft when said seat member is tilted when supporting a weight.

4. A skier's seat member, comprising: a seat member formed of lightweight, rigid material and including a hub and a series of spokes radiating therefrom and a rim joining said spokes and encircling approximately 180 degrees of said hub on the rear side thereof; a support-engaging rest member extending from the front side of said hub opposite said rim and upwardly tilted with respect to said spokes and having a generally semi-spherical depression in its undersurface adapted to engage the upper end of a ski pole; said hub having a generally rectangular through opening extending laterally of said spokes and adapted to receive a supporting member therethrough and diametrically opposed outstanding lugs in either end of said opening; a rear and a forward locking member positioned in either end of said opening and having arcuate horizontal grooves in their exterior surface in which said lugs are positioned; said locking members having opposed cylindrical surfaces on their inner sides at the level of said grooves adapted to closely fit said supporting member and said lugs and grooves being adapted to fixedly clamp said cylindrical surfaces on said supporting member when said seat member is tilted under loading.

5. A skier's seat member, comprising: a seat member formed of lightweight, rigid material and including a hub and a series of spokes radiating therefrom and a rim joining said spokes and encircling approximately 180

degrees of said hub on the rear side thereof; said hub having a generally rectangular through opening extending laterally of said spokes in which a pole is adapted to be positioned and diametrically opposed outstanding lugs in either end of said opening; a rear and a forward locking member positioned in either end of said opening and having arcuate horizontal grooves in their exterior surface in which said lugs are positioned; said locking members having opposed cylindrical surfaces on their inner sides at the level of said grooves adapted to closely fit said pole and said lugs and grooves being adapted to fixedly clamp said cylindrical surfaces on said pole when said seat member is tilted.

6. The subject matter of claim 4, in which there is spring means acting between said locking members biasing them to a normal support clamping position thereby providing means securing said seat member in position without the weight of the user seated thereon.

7. The subject matter of claim 5, in which said seat member includes spring means acting between said locking members and adapted to clamp said seat member in position on said pole thereby providing means securing said seat member in position without the weight of the user seated thereon.

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