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WO-A-88/04768
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FR-A- 2 587 884
US-A- 3 751 832
US-A- 4 402 147

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Description

The present invention relates to a ski boot.

In skiing and especially mountain skiing, there is the strongly felt problem of being able to easily reach a whole range of accessories carried by the skier, such as a timepiece, a compass, a barometer etc., which, due to the environmental context in which such skiing is performed, are stored in pockets or compartments of the wind-breaker, trousers or backpack.

Since the skier usually wears gloves, this operation cannot be performed directly while skiing, forcing the skier to stop to remove the backpack or in any case remove his gloves to reach the various pockets or compartments.

This also occurs if the skis must be prepared before ascent and descent, since the appropriate ski-wax must be chosen; in this case, in fact, appropriate instruments, such as a thermometer and a hygrometer, are required for a correct technical choice.

The document WO 88/04768 shows an electronic processing and display unit clipped on top of a shoe used for walking, in which such unit is connected by a thin flexible lead to a flat sensor pad electronic pedometer detachably fitted within the shoe.

The aim of the present invention is therefore to eliminate the disadvantages described above by providing an invention which allows the rapid and precise visualization of data such as for example the time, the temperature, the degree of humidity, the atmospheric pressure etc. on the part of the skier.

Within the scope of the above described aim, an important object is to provide an invention in which said visualization can occur in a simple manner for the skier without forcing him, for example, to remove his gloves.

Another important object is to provide an invention which is reliable and safe in use.

Not least object is to provide an invention which has modest costs.

The above described aim and objects, as well as others which will become apparent hereinafter, are achieved by a ski boot as defined in the appended claims.

Further characteristics and advantages of the invention will become apparent from the detailed description of a particular embodiment, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is an isometric side view of a ski boot according to the invention, having a display attached to the front quarter;

figure 2 is a view, similar to the preceding one, showing a detachable display;

figures 3 and 4 are isometric partial views of a ski boot according to another aspect of the invention, showing the display attached to the shell and respectively with and without the optional covering

means;

figures 5 and 6 are isometric views of the display respectively with and without the optional covering means;

figures 7-12 are partial cross sectional views of the display, showing several possible ways of attaching it to the ski boot.

With reference to the figures, the reference numerals 1, 101 indicate a ski boot which, in the illustrated example, is constituted by a shell 2, 102 with which a front quarter 3, 103 and a rear quarter 4, 104 are associated.

The ski boot may naturally also be of the front-entry type or have a mixed structure.

The reference numerals 5, 105 indicate a display which may be constituted by a timepiece, a thermometer, a barometer, a compass or other, which can be secured to the ski boot 1, 101 at any point thereof and therefore, for example, laterally to the rear quarter 4, 104 laterally or frontally to the front quarter 3, 103 or at the shell 2, 102.

The display 105 has a dial 106, which can be seen from the outside of the ski boot 101 and may be protected and temporarily concealed by means of covering means 12 associable therewith, as illustrated in figures 3 and 5.

The covering means can also be constituted by a transparent shield 112, as illustrated in figures 4 and 6.

The display can be detachably secured to the ski boot for example by means of a snap-together coupling with a first tooth 7 which protrudes from said display, as illustrated in figure 7, or by glueing or welding (figure 8), or by a snap-together coupling by means of a second protruding tooth 8 (figure 9).

As an alternative, the display 105 can be secured by means of adapted rivets 9 (figure 10), snap-together pins 10 (figure 11), or screws 11 (figure 12).

Finally, figure 2 shows a detachable display 5 constituted by a flexible strip 5a secured to the boot by means of the system commercially known as "Velcro" or a similar system.

The display 5 shown in figures 1 and 2 is a per se known thermometer constituted by an array of cells 6 that change color or brightness depending on the temperature.

The display can furthermore be provided with an independent power source, such as plates of variable color for measuring the temperature (as illustrated in figures 1 and 2) or other meteorological parameters, or solar cells for the operation thereof, or with a power source provided by accumulators inserted in the indicator or inside the ski boot structure.

The use of the invention is very simple, since after removing the optional covering and/or protection means 12, the skier can immediately visualize the indication of the value indicator which, according to the requirements, may be, as already mentioned, a time-

piece, a thermometer, a barometer, a compass, a hygrometer etc.

It has thus been observed that the invention has achieved the intended aim and objects, a precise and rapid visualization having been provided for the data useful to the skier, such as for example the time, the temperature, the degree of humidity, the atmospheric pressure, etc.

This visualization occurs in a very rapid and simple manner without forcing the skier to remove his gloves or to search among the content of pockets or compartments of a wind-breaker or trousers.

The number of value indicators, as well as the dimensions and materials which constitute them, may naturally be the most appropriate according to the specific requirements.

The kind of power source and the possible covering and/or protection means may also be the most pertinent according to the specific requirements.

Claims

1. Ski boot, comprising at least one externally visible display (5,6,105,106) stably or detachably secured thereto, covering means (12,112) being optionally provided at said at least one display, said display having its own power source or a power source associated with said ski boot, said at least one display (5,6,105,106) being constituted by one or more devices such as a timepiece, a thermometer, a barometer, a compass and the like. 25
2. Ski boot, according to claim 1, characterized in that said display is secured to said ski boot by means of rivets (9) or snap-together pins (10) or screws (11) or by glueing or by snap-together coupling at an adapted first tooth (7) which protrudes from said at least one display or by snap-together fastening by means of a second protruding tooth (8) defined on said at least one display. 40
3. Ski boot according to claim 1, characterized in that said at least one display (105) has a dial (106) which can be temporarily concealed by means of said covering means (12). 45
4. Ski boot, according to claim 1, characterized in that said display (5) comprises a detachable strip (5a) such as of the type commercially known as "Velcro". 50
5. Ski boot, according to claim 1, characterized in that said display (5) comprises an array of cells (6) of differently varying hue depending on the ambience temperature. 55

Patentansprüche

1. Skischuh, enthaltend wenigstens eine fest oder lösbar befestigte von außen sichtbare Anzeige (5, 6, 105, 106), wahlweise an der Anzeige vorgesehene Abdeckmittel (12, 112), wobei die Anzeige ihre eigene Energiequelle oder eine mit dem Skischuh in Verbindung stehende Energiequelle aufweist, und wobei die Anzeige (5, 6, 105, 106) durch eine oder mehrere Einrichtungen, wie eine Uhr, ein Thermometer, ein Barometer, einen Kompaß und dergleichen, gebildet wird. 5
2. Skischuh nach Anspruch 1, dadurch gekennzeichnet, daß die Anzeige am Skischuh durch Nieten (9) oder Schnappzapfen (10) oder Schrauben (11) oder durch Kleben oder durch eine Schnappverbindung mit einem angepaßten, sich von der Anzeige erstreckenden ersten Zahn (7) oder durch eine Schnappverbindung mit einem zweiten sich erstreckenden, auf der Anzeige angeordneten Zahn (8) befestigt ist. 10
3. Skischuh nach Anspruch 1, dadurch gekennzeichnet, daß die Anzeige (105) ein Anzeigefeld (106) aufweist, das zeitweise durch Abdeckmittel (12) abdeckbar ist. 15
4. Skischuh nach Anspruch 1, dadurch gekennzeichnet, daß die Anzeige (5) ein lösbares, in der Praxis als "Velcro" bekanntes Band (5a) enthält. 20
5. Skischuh nach Anspruch 1, dadurch gekennzeichnet, daß die Anzeige (5) eine Anordnung von Zellen (6) mit sich, in Abhängigkeit von der Umgebungstemperatur, unterschiedlich ändernden Farben enthält. 25

Revendications

1. Chaussure de ski, **comprenant** au moins une unité d'affichage (5, 6, 105, 106) visible de l'extérieur, fixée de manière permanente ou détachable sur la chaussure, un moyen de recouvrement (12, 112) étant optionnellement prévu sur ladite ou lesdites unités d'affichage, ladite unité d'affichage possédant sa propre source d'alimentation ou une source d'alimentation associée à ladite chaussure de ski, ladite ou lesdites unités d'affichage (5, 6, 105, 106) étant constituées d'un ou plusieurs dispositifs tels qu'une montre, un thermomètre, un baromètre, une boussole et similaires. 40
2. Chaussure de ski selon la revendication 1, **caractérisée** en ce que ladite unité d'affichage est fixée sur ladite chaussure de ski au moyen de ri- 45

vets (9) ou de boutons à pression (10) ou de vis (11), ou par collage, ou par assemblage par enclenchement d'une première dent adaptée (7) qui fait saillie de ladite ou lesdites unités d'affichage, ou par fixation par enclenchement d'une seconde dent en saillie (8) définie sur ladite ou lesdites unités d'affichage.

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3. Chaussure de ski selon la revendication 1, **caractérisée** en ce que ladite ou lesdites unités d'affichage (105) possèdent un cadran qui peut être temporairement caché par ledit moyen de recouvrement (12).

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4. Chaussure de ski selon la revendication 1, **caractérisée** en ce que ladite unité d'affichage (5) comprend une bande détachable (5a), telle que celle du type connu sous la désignation commerciale "Velcro".

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5. Chaussure de ski selon la revendication 1, **caractérisée** en ce que ladite unité d'affichage (5) comprend une série de cellules (6) de couleurs différemment variables en fonction de la température ambiante.

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Fig. 1

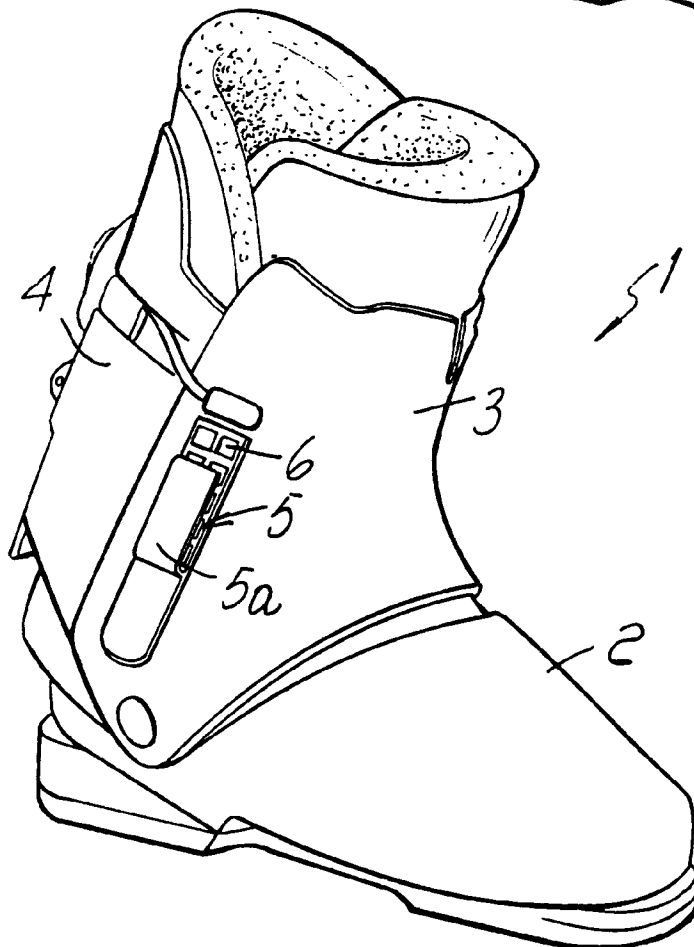
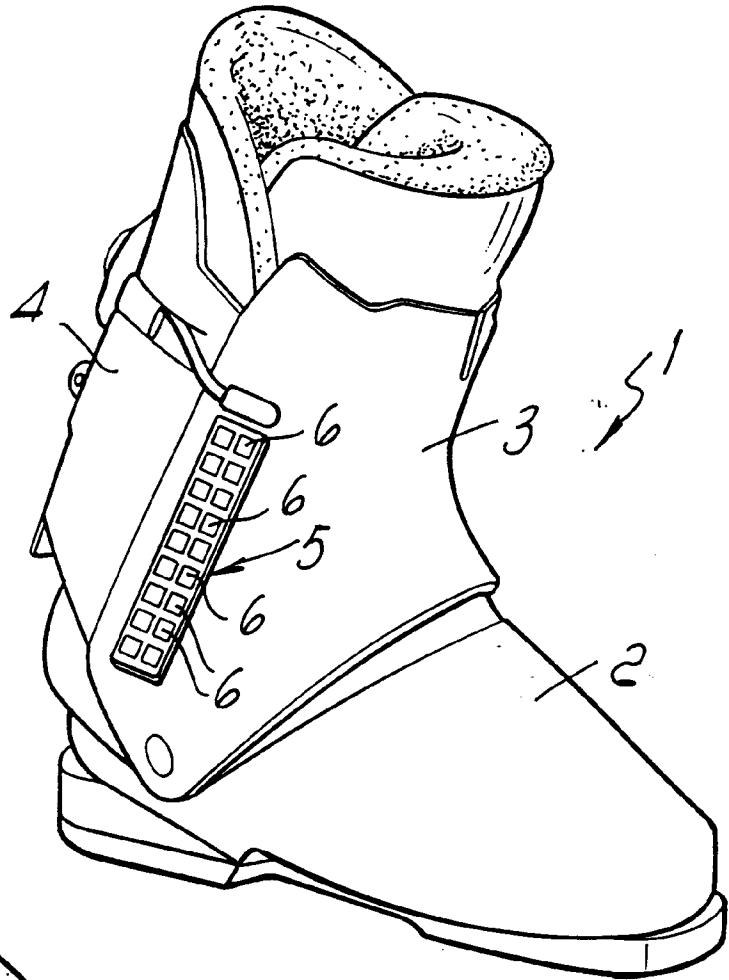
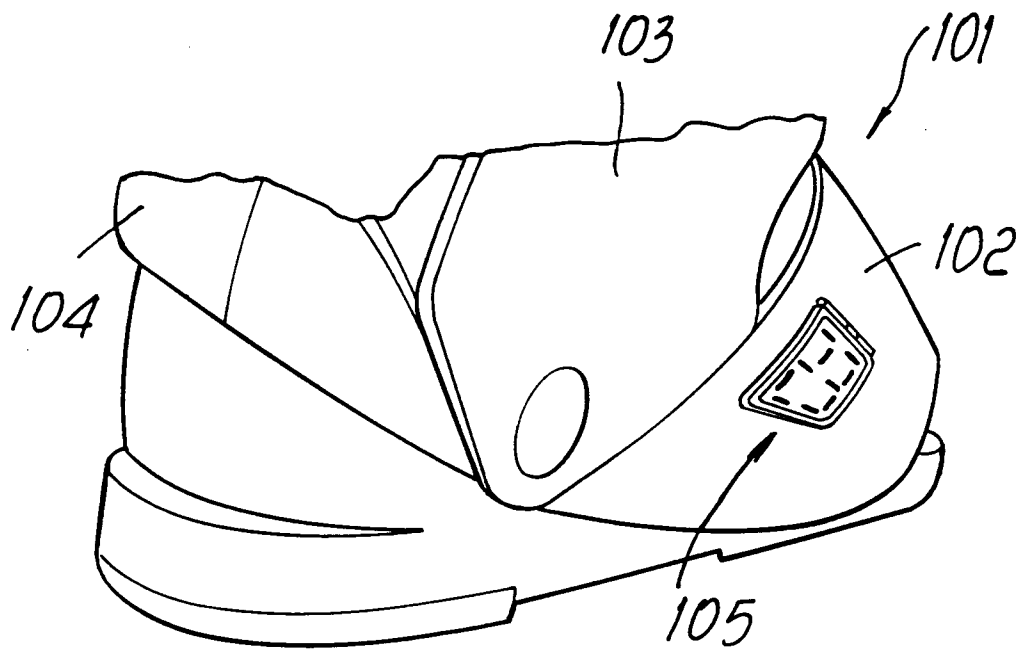
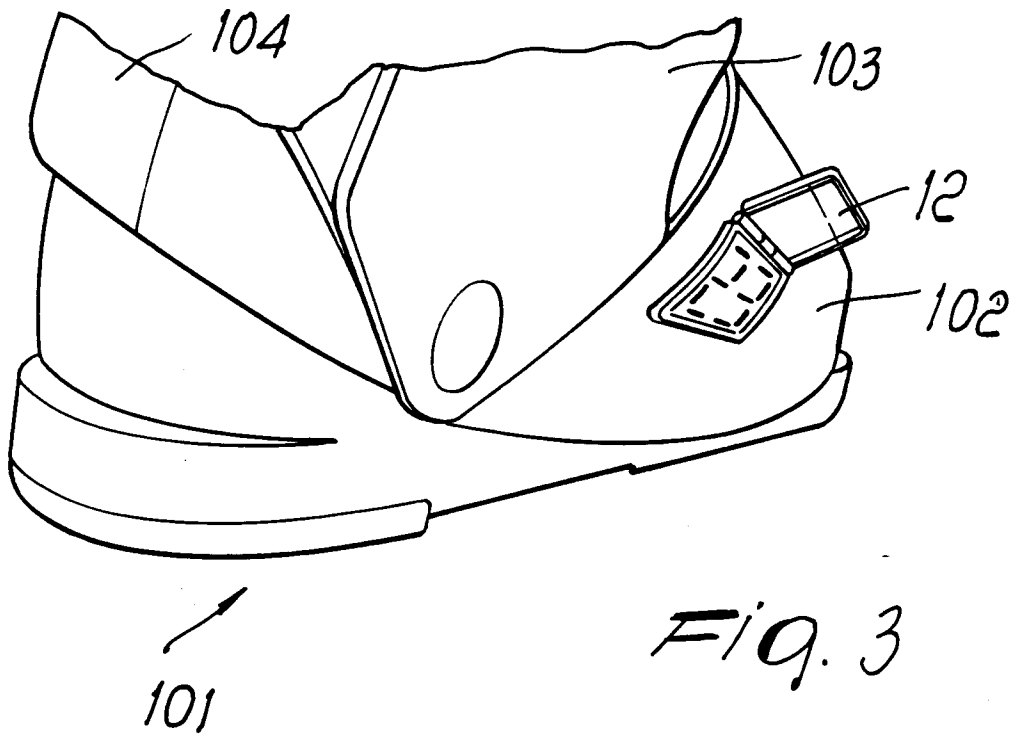


Fig. 2



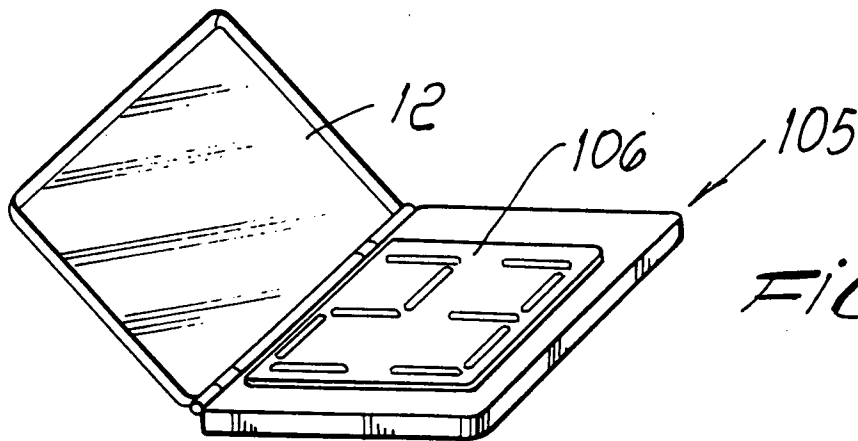


Fig. 5

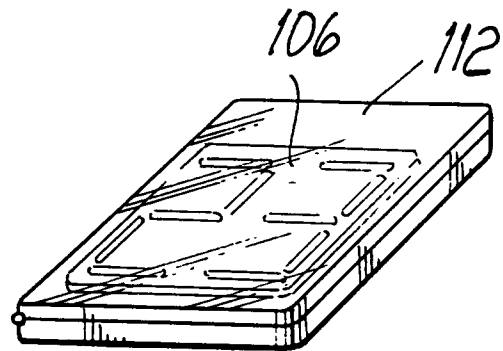


Fig. 6

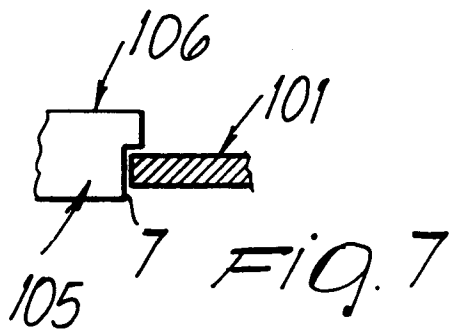


Fig. 7

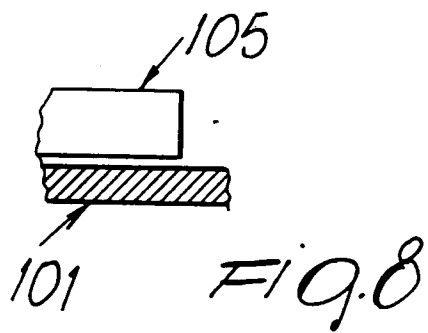


Fig. 8

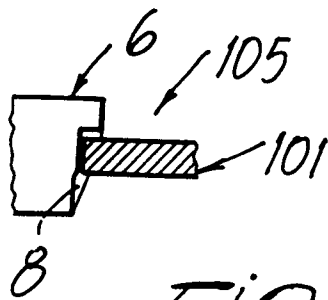


Fig. 9

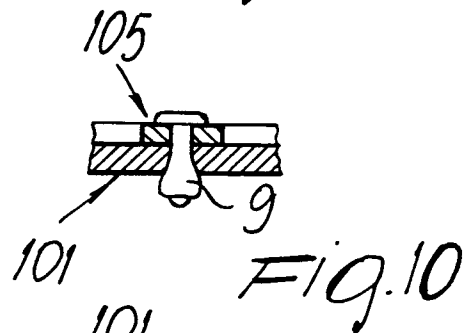


Fig. 10

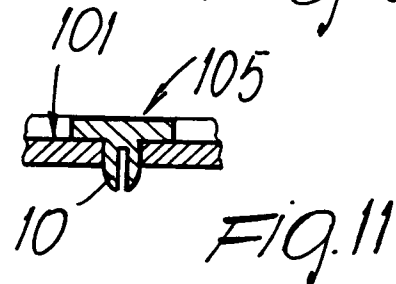


Fig. 11

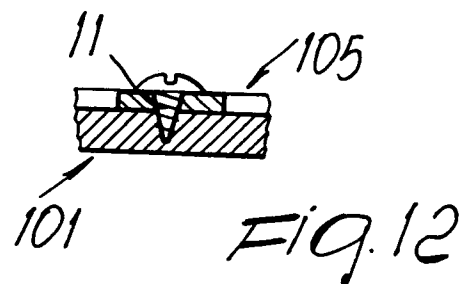


Fig. 12