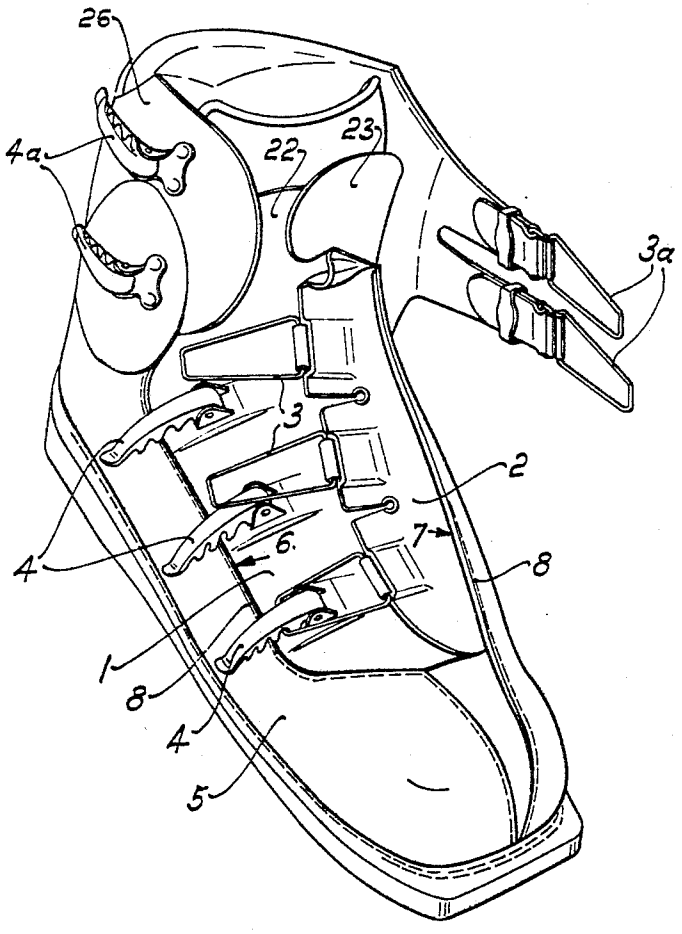
Dec. 16, 1969 L. BASO 3,483,638

METHOD FOR THE MANUFACTURE OF BUCKLE-TYPE SKI BOOTS

Filed Feb. 14 , 1967 2 Sheets-Sheet 1

Fig. 1.



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Fig. 2

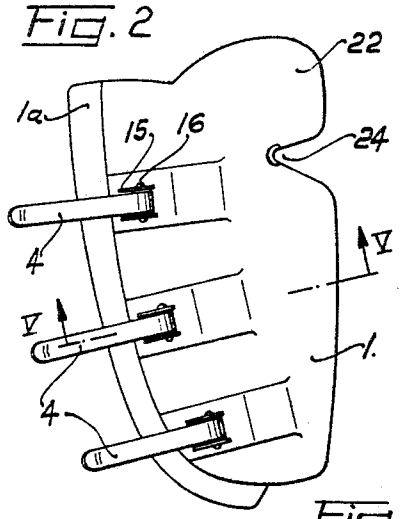


Fig. 3

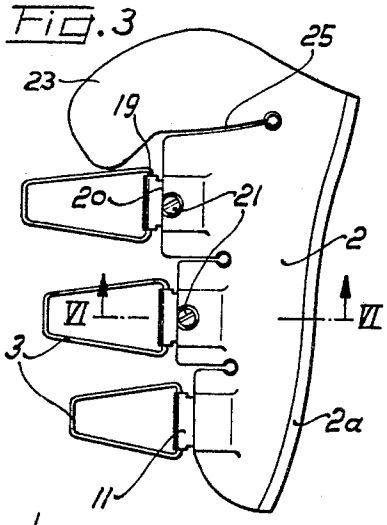


Fig. 4

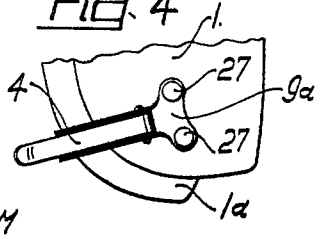


Fig. 7

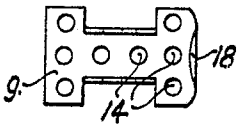


Fig. 5

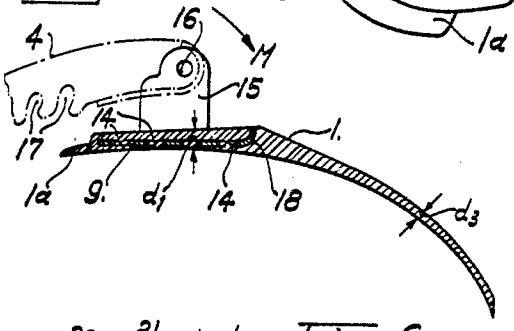


Fig. 8

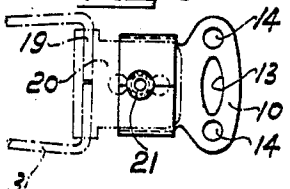


Fig. 6

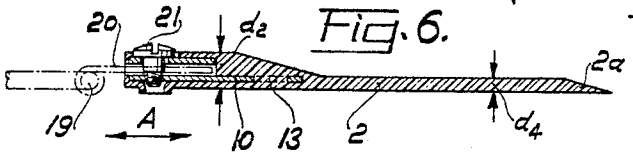
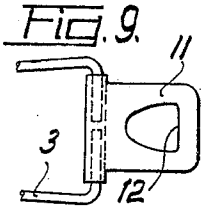


Fig. 9



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METHOD FOR THE MANUFACTURE OF BUCKLE-TYPE SKI BOOTS

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Claims priority, application Italy, Feb. 16, 1966, 3,675/66
Int. Cl. A43b *10/00, 23/00*
U.S. Cl. 36—2.5 4 Claims

ABSTRACT OF THE DISCLOSURE

Buckle-type ski boots having overlapping instep portions, one side of said instep portions having the clamping loops and the other side having the tensioning levers. The front instep portions of the shoe are comprised of flexible plastic inserts which may have the mountings for buckle parts molded or pressed into the plastic material. The instep inserts are sewn into recesses provided in the boot.

This invevntion relates to the manufacture of buckle-type ski boots comprising overlapping instep portions, one of said instep portions having the clamping loops and the other one of said instep portions having the tensioning levers of the buckles secured thereto. The manufacture of such buckle-type ski boots has so far been relatively difficult and expensive because each buckle portion had to be affixed by means of a plurality of rivets onto the respective instep portions in an exactly predetermined position. Furthermore, very strong and high quality instep leather had to be used for the overlapping instep portions so that the pressure of the buckles acting on the foot would not be too unpleasant. To distribute the pressure of said buckles it was often necessary to reinforce the instep portions. Fastening of the buckle parts on the instep portion, furthermore, has the disadvantage that said instep portion is deformed by the high stress on the buckles.

To overcome these disadvantages the invention provides for the manufacture of buckle-type ski boots with overlapping instep portions in which the front instep portion has recesses in the area of the clamping loops and/or tensioning levers. The clamping loops or tensioning levers are each secured to a flexible instep insert, said instep insert being made advantageously of suitable, flexible plastic. Said instep insert or inserts are then secured in the respective recess of the front instep portion by seams or the like. The instep inserts are advantageously made of plastics, such as nylon in particular.

Said new method makes it possible to more economically manufacture buckle-type ski boots. By using plastic, especially thermoplastic, material for the instep inserts the base plates of the buckle parts can be molded or pressed into the plastic material so that fastening by means of rivets is no longer needed. Furthermore, several buckle parts may be fastened at the same time to the instep parts by molding them into the plastic material. A further advantage of this method is that the plates of the buckle parts cannot be seen. The use of plastic material furthermore has the advantage that it is not only more economical than the instep leather but that said plastic material is stronger than said instep leather and consequently is not deformed by the high stress on the buckles.

The invention is further discussed hereinbefore in detail with reference to the illustrative embodiments set forth in the drawings, wherein:

FIGURE 1 is a diagrammatic view of a buckle-type ski boot utilizing overlapping instep inserts;

FIGURES 2 and 3 are top views of the instep inserts of FIGURE 1;

FIGURE 4 is another embodiment of the instep insert of FIGURE 2;

FIGURE 5 is a section along the line V—V of FIGURE 2 in a larger scale;

FIGURE 6 is a section along the line VI—VI of FIGURE 3 in a larger scale;

FIGURE 7 is a top view of a part of FIGURE 5;

FIGURE 8 is a top view of a part of FIGURE 6; and

FIGURE 9 is a further embodiment of a clamping loop utilizing a plate.

FIGURE 1 illustrates a buckle-type ski boot with overlapping instep portions **1** and **2**, whereby the instep portion **2** has clamping loops **3** and whereby the instep portion **1** has tensioning levers **4** of the buckles. As illustrated in the drawings, the front instep portion **5** of the ski boot has recesses in the area of the buckles whereby several tensioning levers or clamping loops are each secured onto either of the flexible instep inserts **1** or **2**. The manufacture is done in a way that the instep inserts **1** and **2**, for example, shown in FIGURES **2** and **3**, together with the tensioning levers **4** or clamping loops **3**, secured thereto, are made and are then arranged in the respective recess of the front instep part **5** indicated at **6** or **7** and are securely connected to said front instep part by seams **8** or the like.

The instep inserts **1** and **2** are advantageously made of plastic material, for example, nylon, so that, as is illustrated in FIGURES 2, 3, 5 and 6, the plates **9**, **10** and **11** which are used for pivotable mounting of the clamping loops **3** or tensioning levers **4**, can be molded or pressed into the material of the instep inserts **1** and **2**. For this purpose the plates **9–11** are advantageously provided with one or several openings **12–14** into which the plastic material can penetrate. The plate **9** carries a bearing block **15**, which has the tensioning lever **4** provided with recesses **17** pivotably mounted thereon at **16**. A pull-out moment M occurs upon tensioning of said lever. To prevent plate **9** from producing a strong pressure on the foot due to said pull-out moment, the edge **18** of the plate **9** facing the instep of the foot is bent upwardly according to FIGURES 5 and 7.

Furthermore, the drawings illustrate that the instep inserts **1** and **2** may be of different thicknesses depending on their use. According to FIGURES 5 and 6, said instep inserts **1** and **2** are of a thickness d_1 or d_2 at the mounting area of the plate, while said inserts may be considerably thinner at d_3 and d_4. This not only results in saving material but also in obtaining a greater flexibility of the instep parts. Said instep parts further comprise tapered edge sections **1***a*, or **2***a* at the surfaces facing the recesses **6** and **7** of the front instep part, said edge sections being used for fastening at the front instep part by means of seams or the like.

FIGURES 3, 6 and 8 illustrate, for example, an instep insert having adjustable clamping loops **3** which are pivotably monuted on a shackle **20** at **19**, said shackle being mounted adjustably to the plate **10** in direction A by means of a screw **21**. The clamping loop can, as illustrated in the lower part of FIGURE 3 and in FIGURE 9, also be provided fixedly secured to the insert **2** by pivotably mounting said clamping loop directly on the plate **11**.

In the advantageous embodiment, illustrated in the drawing, the instep inserts **1** and **2** have extensions **22** and **23** at their upper end, which extensions are separated from the insert by cuts **24** and **25** and which according to FIGURE 1 form a seal by overlapping.

According to FIGURE 4, additional tensioning levers **4***a* and clamping loops **3***a* are provided which are mounted in the usual manner to the upper part **26** of the instep part

made of leather so that said buckles close the upper instep part which surrounds the ankle.

FIGURE 4 illustrates that the plate *9a* which is used for carrying a tensioning lever **4** can, if necessary, also be mounted to the instep insert **1** by means of rivets **27**.

In the above-described embodiment of the invention both instep inserts are made of plastic, particularly thermoplastic, material. However, if desired, only one insert need consist of plastic.

The method of the invention or the instep inserts of the invention have, in addition to the above-mentioned advantages, further desirable characteristics: The inserts made of plastic are absolutely waterproof. Since said inserts are stronger and last longer than inserts of leather, said inserts remain unchanged. This means that even upon closing of the buckles there will always be a uniform tension and that further adjustment of said buckles will not be required.

The aforedescribed molding and pressing of the plate of the instep parts has furthermore the advantage that rust cannot form on the molded parts and thus rust protection is not required for said molded parts.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. In a method of making ski boots having overlapped instep portions which are fastenable together by tension lever means and clamping loop means, the steps comprising:

forming said ski boots with a pair of spaced apart sides adjacent the front to thereby define an open front therein;

forming a pair of overlapable insert parts of moldable material having a combined width sufficient to fit into and close said open front of said ski boot;

molding a mounting plate into the moldable material of each of said insert parts;

engaging said tension lever means to said mounting plate in one of said insert parts;

engaging said clamping loop means to said mounting plate in the other of said insert parts;

securing each of said insert parts to one of said spaced apart sides on said ski boot to thereby close said open front therein.

2. In a ski boot having a pair of spaced apart side portions adjacent the front thereof, the improvement comprising:

an elongated first insert member made of a moldable plastic secured along a first longitudinal edge to an edge of one of said spaced apart side portions, said first insert member extending toward the other of said side portions partially across said front of said ski boot, first fastening means secured to said first insert member, a first thick portion adacent the location of said first fastening means to provide reinforcement for said first fastening means, said first thick portion being spaced from said first longitudinal edge to define a thin strip along said first longitudinal edge, said first insert member being sewn to said one of said spaced apart side portions of said ski boot along said thin strip;

an elongated second insert member made of a moldable plastic secured along a second longitudinal edge to an edge of the other of said spaced apart side portions, said second insert member extending toward said one of said side portions partially across said front of said ski boot and in overlapping relationship with said first insert member, second fastening means secured to said second insert member for cooperating with said first fastening means and for fastening together said first and second insert members, said second insert member having a second thick portion adjacent the location of said second fastening means to provide reinforcement for said second fastening means, said second thick portion being spaced from said second longitudinal edge to define a thin strip along said second longitudinal edge, said second insert member being sewn to said other said side portion of said ski boot along said thin strip.

3. In a ski boot having a pair of spaced apart side portions adjacent the front thereof, the improvement comprising:

an elongated first insert member made of a moldable plastic and secured along a first longitudinal edge to an edge of one of said spaced apart side portions, said first insert member extending toward the other of said side portions partially across said front of said ski boot, at least one plate secured to said first insert member, first fastening means secured to said plate in said first insert member, said plate having at least one opening therein into which the moldable plastic material of said first insert member can penetrate to securely fasten said plate to said insert member;

an elongated second insert member secured along a second longitudinal edge to an edge of the other of said spaced apart side portions, said second insert member extending toward said one of said side portions partially across said front of said ski boot and in overlapping relationship with said first insert member, at least one plate secured to said second insert member, second fastening means secured to said plate in said second insert member, said plate having at least one opening therein into which the moldable plastic material of said second insert member can penetrate to securely fasten said plate to said second insert member, said first and second fastening means cooperating with each other to fasten together said first and second insert members.

4. The ski boot defined in claim **3**, wherein the edge of said plate facing one of said side portions and having the tension lever fastened thereto is bent upwardly.

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U.S. Cl. X.R.

36—50