Nov. 16, 1971 T. G. SMOLKA 3,619,837

SHOETREE

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FIG. 1

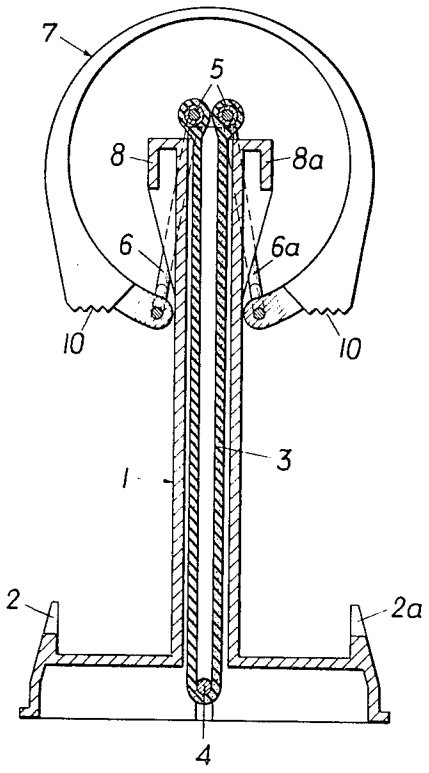

FIG. 2

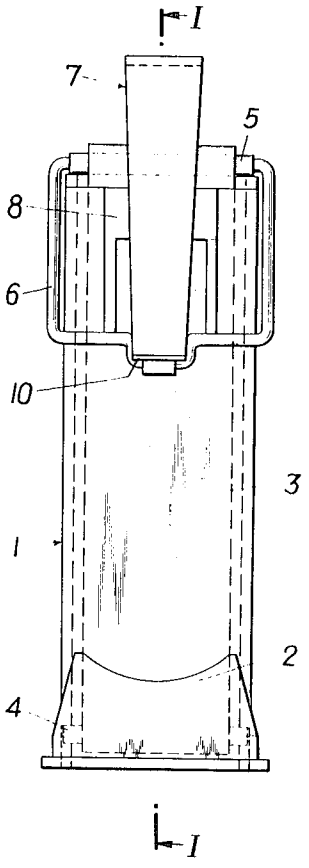

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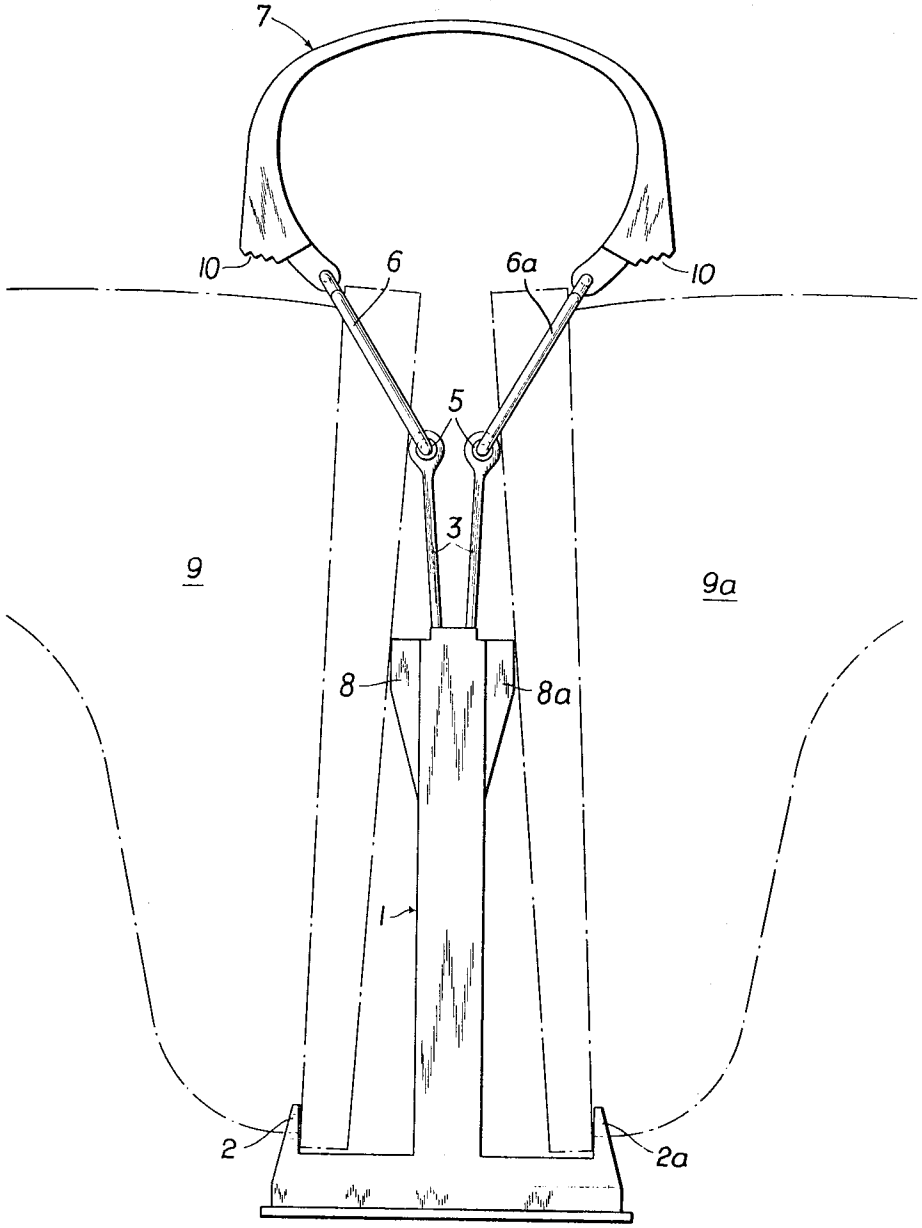
FIG. 3



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SHOETREE

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Int. Cl. A43d 5/00
U.S. Cl. 12—120.5 11 Claims

ABSTRACT OF THE DISCLOSURE

A shoetree primarily for ski boots. Same includes a central post with means on each side thereof rigid with respect to the post for receiving one end of each of a pair of ski boots. An elongated elastic device such as a rubber band is hung at its midpoint on or near said post. Independent clamp structures are arranged to engage the other ends of each of said ski boots and are connected to respective ends of said rubber band for being held thereby in tension against said ski boots.

The invention relates to a shoetree, in particular for ski boots, which has a base plate and which further has on each side of said base plate holding means for both a shoe heel and a shoe toe, such holding means on each respective side of the base plate being arranged adjustably relatively to one another under the force of springs, rubber bands or the like.

Ski boot trees are known in which the holding means for heel and toe are constructed as pivotable clamps which are movable against the force of springs. Upon insertion of the shoe first on one side of the base plate a clamp is placed over the one end of the shoe sole and then the second clamp is moved against the force of a spring and is placed over the other end of the shoe sole. Thereafter the second shoe is received on the other side of the base plate in the same manner. In such an arrangement there exists the undesirable possibility that the first clamp may fall off the shoe sole before the second clamp is applied over the other shoe sole end. Thus insertion of the shoes can be relatively difficult and time consuming. Furthermore, in the case of each shoe, the entire force of the respective spring must be overcome.

The basic purpose of the invention is to overcome these disadvantages and the invention provides that on both sides of one end of the base plate one holding means is stationarily arranged, or formed integrally with the base plate, and the other two holding means which are constructed as clamps are pivotably secured at the ends of a spring, a rubber band or the like which is in turn placed in a U-shaped manner around a bolt or the like arranged in the base plate. The rigidity of the sole clamp minimizes the danger of the shoe falling off and the U-shaped arrangement of the spring makes twice the spring length available during the insertion of the first shoe. Thus, only half of the force is required at this point and the full spring force becomes effective only after the insertion of the second shoe.

The subject matter of the invention is illustrated in an exemplary embodiment in the drawing in which:

FIGS. 1 and 2 illustrate a shoetree of the invention shown in sectional planes associated with one another.

FIG. 3 illustrates the shoetree in position of use.

According to FIGS. 1 to 3, the shoetree has a base plate **1** which is formed in one piece with two holding means **2**, **2***a* for one shoe toe end each. A rubber band **3** is placed in an approximately U-shaped arrangement around a bolt **4** secured in the base plate **1**. A sleeve **5** is arranged at each end of the rubber band, two clamps

6, **6***a* being pivotally supported in said sleeves. The sleeves **5** are caused in response to the force of the rubber band to engage the upper end of the base plate **1** and thereby limit the movement effected by the rubber band. Further, the clamps are hingedly connected with an elastic handle **7**. The base plate **1** is, in this embodiment, approximately half the length of the sole of the ski boot. However, it is to be recognized that the base plate **1** can be of any desired height.

For clamping the shoes, the one end of the sole of one shoe **9** is placed into the holding means **2**. The clamp **6** is then pulled by means of the handle **7** to extend the rubber band **3** upwardly and the clamp is placed over the other sole end. The second shoe **9***a* is clamped in the same manner on the other side of the base plate **1**. Only during the insertion of the second shoe, must the entire clamping force of the rubber band be overcome. For a better handling suitable roughening, teeth **10** or the like may be arranged on the handle.

As can be recognized from FIG. 3, the shoes **9**, **9***a* rest against abutments **8**, **8***a* so that the shoe soles are stressed. Thus the resilient effect of the rubber band tends to return possibly bent shoes back into their original position. The abutments **8**, **8***a* are preferably arranged in such a manner that they lie approximately in the center of the shoes **9**, **9***a*. However, the abutments **8**, **8***a* can, if desired, be higher or lower. It therefore does not matter whether the shoes are arranged and clamped with the toe or with the heel down.

The holding means **2**, **2***a*, **6**, **6***a* are constructed so that they fit for all common shoe soles. The holding means **2** and **2***a* could as a practical matter receive shoe soles of twice the thickness than the illustrated shoe soles. The same is true of the clamps **6**, **6***a*. The shoe tree is constructed with only a few parts and these parts are very simple. It is effective for its purpose and requires only a little room in comparison to the presently known shoetrees, in particular when not in use.

Of course, the invention is not limited to the exemplary embodiment. In place of the rubber band a coil spring could also be provided. Further, there exists the possibility of connecting fixedly or movably each one of the clamps **6**, **6***a* to its own handle. Various other structural possibilities also lie within the scope of the invention.

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

1. A shoetree, comprising;
means defining an upstanding post;
stop means affixed rigidly to one end of said post means for providing an abutment which is to be engaged by one end of each of a pair of ski shoes;
a pair of clamp means, each of said clamp means being adapted for engaging an opposite end of one of said ski shoes;
elongated tension means connected by each free end thereof respectively to said clamp means; and
means engaging said elongated tension means intermediate said free ends thereof and fixed with respect to said post means;
whereby the first of said clamp means may be placed in position without appreciably tensioning said elongated tension means and upon placing the second of said clamp means in position the entirety of said elongated tension means will be tensioned.

2. A shoetree according to claim **1**, wherein said elongated tension means is an elongated band having an elastic characteristic.

3. A shoetree according to claim **1**, wherein said elongated tension means is an elongated band of rubber.

4. A shoetree according to claim **1**, wherein said handle is an elastic handle.

5. A shoetree particularly for ski shoes, comprising in combination:

a central post comprising a base plate;

means affixed rigidly to one end of said central post for providing on opposite sides thereof receptacles to receive in each thereof one end of a ski shoe;

a pair of clamp means, each of said clamp means engaging an opposite end of one of said ski shoes;

elongated tension means connected by each free end thereof respectively to one of said clamp means; and

means slideably engaging said elongated tension means near a midpoint thereof and fixed with respect to said central post;

whereby the first of said clamp means may be placed in position without appreciably tensioning said elongated tension means and upon placing of the second of said clamp means in position the entirety of said elongated tension member will be tensioned.

6. A shoetree according to claim 5, wherein said central post is of less height than the length of the sole of said ski boots so that upon placement of said clamp means in position they will be located at points spaced from the adjacent end of said post.

7. A shoetree according to claim 5, wherein said central post is hollow and said elongated tension means extends downwardly therethrough.

8. A shoetree according to claim 5, wherein said central post is hollow and said elongated tension means extends downwardly therethrough and wherein the means

engaging the central portion of said elongated tension means is located near the base of said central post.

9. A shoetree according to claim 7, wherein the ends of said elongated tension means are provided with means for engaging said clamp means, said means being of a sufficient size as to prevent their entering into the hollow portion of said post whereby to limit the movement of said clamp means in response to said elongated tension means when same are in an unclamped condition.

10. A shoetree according to claim 5, wherein said clamp means each comprise a loop arranged for substantially encircling an end of the sole of each of said ski boots.

11. A shoetree according to claim 10, wherein adjacent ends of each of said loops are engaged by the free ends of said elongated tension means and wherein the other ends of said loops are connected by a handle.

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