Dec. 3, 1968 P. ALLAIN 3,414,279

ANTIVIBRATORY MEMBER FOR SKIS

Filed April 3, 1967

FIG.1

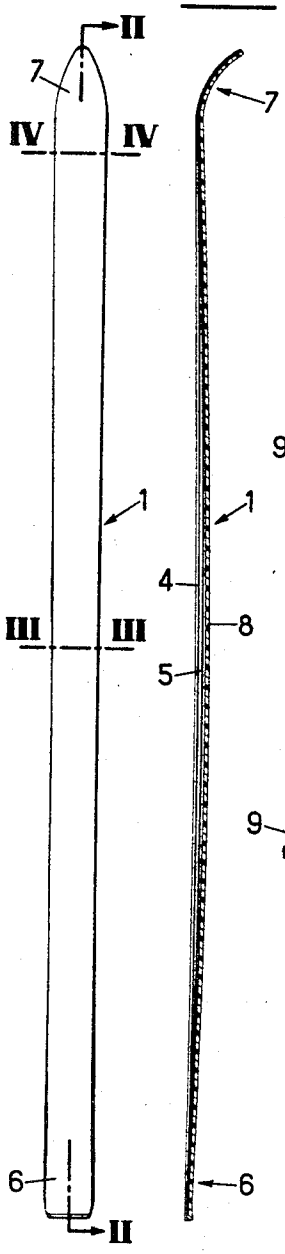


FIG.2

FIG.3

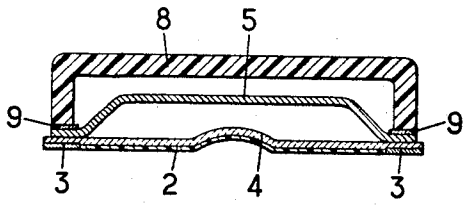


FIG.4

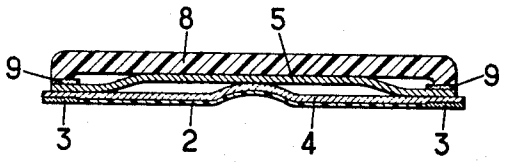
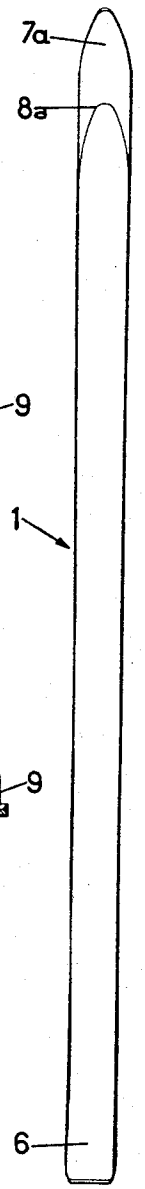


FIG.5



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ANTIVIBRATORY MEMBER FOR SKIS

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8 Claims. (Cl. 280—11.13)

ABSTRACT OF THE DISCLOSURE

Means for damping the vibrations of a ski which comprises an elongated rigid channel member the edges of which are fastened to the longitudinal edges of the upper surface of the ski proper, preferably through an intermediate strip of spongy resilient material.

It is conventional practice to manufacture metallic skis comprising a stamped-out bottom plate rivetted or glued to a channel member which may also be a stamping and constitutes the upper part of the ski. Such skis also comprise two edge members and a plastic plate beneath the bottom metal plate.

However, such metallic skis have a tendency to vibrate as they pass over bumps and irregularities in the terrain, especially when the skier is travelling at high speeds.

These vibrations lift the skis off the ground and make it difficult for the skier to keep his skis parallel.

The present invention palliates these disadvantages and is directed to a new article of manufacture which consists of an antivibratory member, which may be formed by extrusion, and which may be attached by any suitable means, such as gluing, to the channel member which constitutes the upper part of the ski. A spongy elastic material may be interposed between the antivibratory member and the channel member. The antivibratory member may stop a little short of the front end of the ski, or may comprise a thin portion extending all the way to the front end. The height of the antivibratory member also decreases as it approaches the rear end of the ski.

The invention also includes the new article of manufacture which consists of a ski equipped with said anti-vibratory member.

The characteristics features of the invention will be better understood from a reading of the following description of a preferred embodiment of the ski equipped with a plastic anti-vibratory member in accordance with the invention, which description is given purely by way of example, and with reference to the accompanying drawings, in which:

FIGURE 1 is a plan view of a ski equipped with a plastic anti-vibratory member in accordance with the invention;

FIGURE 2 is a longitudinal section, taken along the line II—II of FIGURE 1;

FIGURE 3 is a transverse section taken through the middle of the ski along the line III—III of FIGURE 1;

FIGURE 4 is a transverse section taken near the front end of the ski along the line IV—IV of FIGURE 1; and

FIGURE 5 shows an alternative embodiment of the ski in which the anti-vibratory member stops short of the front end of the ski.

FIGURE 1 shows the ski **1** having the profile of any conventional ski, in that it is slightly narrower toward the middle.

FIGURE 2, and the sectional views shown on FIGURES 3 and 4, show a plastic bottom plate **2** and edge members **3** which are fastened to a metallic plate **4**, preferably by gluing. The metal plate **4** supports a metallic channel member **5** so shaped that the total thickness of

the ski diminishes toward the tow ends of the ski, so that the end portions retain a certain degree of flexibility.

The members **2**, **3**, **4** and **5** are shown in section on FIGURE 4, from which it will be seen that the distance between the members **4** and **5** is considerably smaller toward the front end of the ski.

The same is true near the rear end of the ski, as may be seen from FIGURE 2.

Reference numeral **7** designates the front part of the ski of FIGURE 1, and *7a* the front part of the ski of FIGURE 5. In the first case, the channel shaped plastic antivibratory member **8** extends all the way to the front end of the ski, whereas in the embodiment of FIGURE 5, the plastic antivibratory member **8** stops short of the front end, so as to leave the flexibility thereof unimpaired.

The foot of the skier rests on the anti-vibratory channel member shown at **8** in FIGURES 2, 3 and 4.

The antivibratory plastic channel member **8**, where shown in the cross-sectional view of FIGURE 3, does not touch the metallic channel member **5**, but is in contact therewith in the plane of FIGURE 4, near the front end of the ski.

The antivibratory plastic channel member **8** is attached to the member **5** through strips **9** of a spongy elastic material impregnated with wax. These permit the member **8** to act as a resilient shock absorber to damp the vibrations to which the ski is subjected, especially at high speeds.

A strong cement such as that sold under the trademark "Redux" may be used to fasten the various metallic members together.

The strips **9** may be made of gummed neoprene.

However, the choice of cementing materials is not limited to these specific materials.

It will be appreciated that the embodiment which has just been described may be modified as to detail, and various elements thereof replaced by their mechanical equivalents, without thereby departing from the basic principles of the invention.

What is claimed is:

1. In combination, a metallic ski and a relatively rigid antivibratory member consisting of a plastic channel member (**8**) having sides fastened to the longitudinal edges of the upper surface of the ski, the material of said plastic channel member being of uniform thickness from end to end and the depth of the channel formed thereby being sufficient to prevent contact between the bottom of the plastic channel member and the upper surface of the ski at the middle of the ski.

2. The combination claimed in claim **1** in which the sides of said plastic channel member are adhesively secured to the upper surface of said ski.

3. The combination claimed in claim **2** in which said ski comprises a metallic channel member, a plastic bottom plate beneath the metallic channel member, and edge members extending along the longitudinal edges of the bottom plate, both said edge members and said bottom member being adhesively secured to said metallic channel member.

4. The combination claimed in claim **2** comprising strips of elastic material adhesively secured between the sides of said plastic channel member and the upper surface of said ski.

5. The combination claimed in claim **2** in which the sides of said antivibratory member are adhesively secured directly to the upper surface of said ski.

6. The combination claimed in claim **1** in which said antivibratory member extends the full length of said metallic ski.

7. The combination claimed in claim **1** in which the antivibratory member stops short of the front end of the ski.

8. The combination claimed in claim in which the depth of the channel defined by said plastic channel member decreases from the middle of the ski toward each end.

References Cited

UNITED STATES PATENTS

2,362,380	11/1944	Kallstrom et al.	280—11.13
2,550,002	4/1951	Chorney	280—11.13
2,560,693	7/1951	Hickman	280—11.13
2,995,379	8/1961	Head	280—11.13

FOREIGN PATENTS

145,213	4/1936	Austria.	

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