Nov. 18, 1969 W. L. MADSON 3,478,827

SKI SLOPE GROOMING DEVICE

Filed March 18, 1966

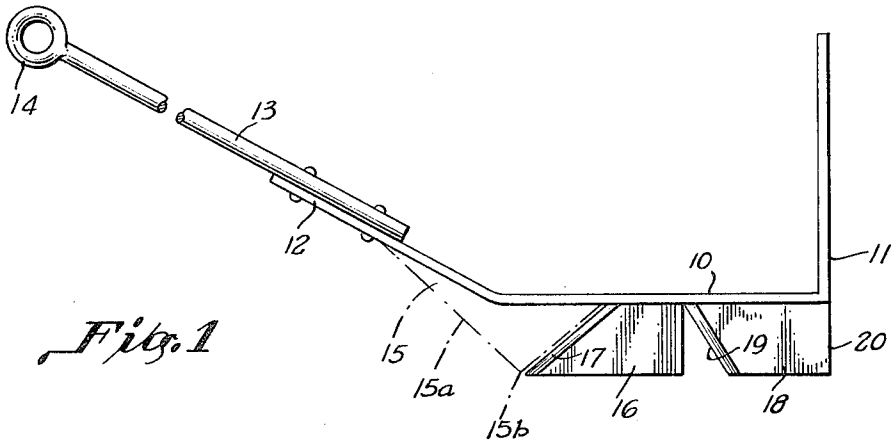


Fig. 1

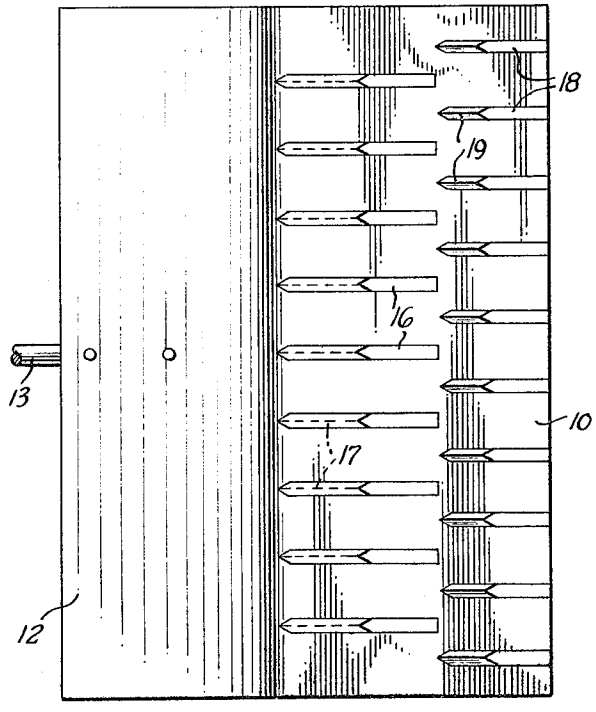


Fig. 2

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United States Patent Office

3,478,827

Patented Nov. 18, 1969

3,478,827

SKI SLOPE GROOMING DEVICE

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Filed Mar. 18, 1966, Ser. No. 535,458
Int. Cl. A01b *15/00, 23/00*
U.S. Cl. 172—379 1 Claim

ABSTRACT OF THE DISCLOSURE

A ski slope grooming device comprised of a drag formed with a transversely disposed trough-shaped base, and a plurality of staggered frontally sharpened blades welded thereunder presenting leading edges of different inclination from the vertical.

This invention relates to improvements in snow slope grooming devices, and more particularly to a novel grooming device of the tractor drawn type.

An object of the invention is to provide a device of the type which will comminute a glare ice or packed snow surface of a ski slide snow slope to present a renewed surface of a desirable type for use.

Another object of the invention is to provide a highly efficient device of the type which is relatively inexpensive of manufacture and of durable construction.

Other and further objects of the invention will appear as the description proceeds, reference being had to the accompanying drawing, in which:

FIG. 1 is a side view in elevation of a grooming device embodying the invention.

FIG. 2 is a fragmentary inverted plan view of the body floor of the device.

Referring more particularly to the drawing, the numeral **10** refers to the body floor of the device, comprising a horizontally disposed metal plate having an integral vertically upstanding transverse portion **11** at the rear thereof. The element **11** serves as a retaining wall for the positioning of weight elements on the floor **10** of the device. An inclined upwardly and forwardly disposed portion **12** is also integral with the body floor **10**. Attached thereto, as by brazing or other suitable means, is a drawbar or tubular element **13** terminating at its free end in a ring **14** for engagement with a source of power such as a tractor.

An insert indicated by dotted lines **15**, is utilized for a snow packing purpose. This structure has a frontal transverse planar surface at **15***a* terminating at the lower edge **15***b* thereof at the bottom edges of the blades **16** and **18**. This will pack the snow and shield it from the cuting action of the said blades. Subjoined to the body floor **10** are pluralities of downwardly projecting blades **16** and **18**. The blades **16** underlie the forward portion of floor **10** and are transversely spaced thereunder. Each blade **16** is provided with a sharp frontal edge **17** slanted forwardly from top to bottom and having a horizontal lower edge at **17***a*.

Each blade **18** has a sharp frontal edge at **19** thereof and is slanted backwardly from top to bottom, the slant being of lesser degree than that of the forward blades **16**. When the element **15** is removed, the blades are free to groom the ski surface. The opposed angles of the two sets of blades as they cut through a snow or ice crust which forms on the snow surface tend to keep the cutters moving along a horizontal plane. If blades **16** were employed alone, they would tend to gouge downwardly into the earth. The blades **18** are staggered relatively to blades **16** and have horizontal lower edges as at **19***a*.

It will be understood that the device may be tractor drawn over a ski slope which has a coating of glare ice with the result that the pluralities of cutting blades will break up and powder the surface to a usable consistency as a ski path. The blades are vertically disposed under the floor **10** and are parallel to the direction of travel of the device. Depending on the degree of slope, the device may be tractor drawn up or down the same. If desired, chained drag rods may be trailed behind the device, as well as other old and well-known structures in the prior art.

It will be understood that the device is capable of many modifications in structure and design, without departing from the spirit of the invention, within the scope of the appended claim.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent of the United States, is:

1. A ski slope grooming device comprising a horizontal floor body plate, a rear vertical plate transversely coextensive therewith and integral therewith, a frontal upwardly inclined portion also integral therewith, a plurality of frontally sharpened blade plates vertically and in parallel relation underlying said floor body plate spaced transversely thereon from side edge to side edge thereof, a frontal row of said blade plates being staggered relatively to a trailing row of plates, frontal edges on said frontal plates inclined forwardly from top to bottom, and frontal edges of said trailing plates inclined rearwardly from top to bottom.

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U.S. Cl. X.R.

37—41; 172—766