March 8, 1949. L. C. BERG 2,464,016

KNOCKDOWN TOBOGGAN

Filed Aug. 27, 1945

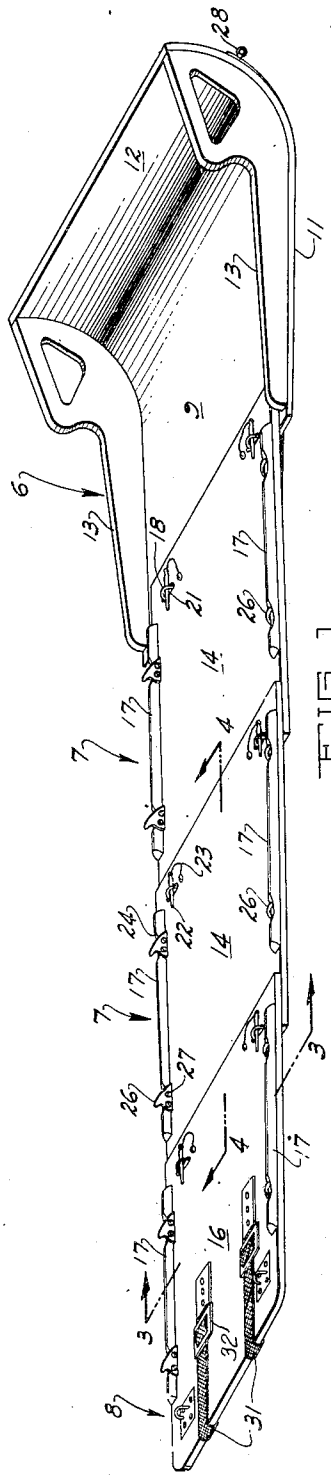


FIG. 1

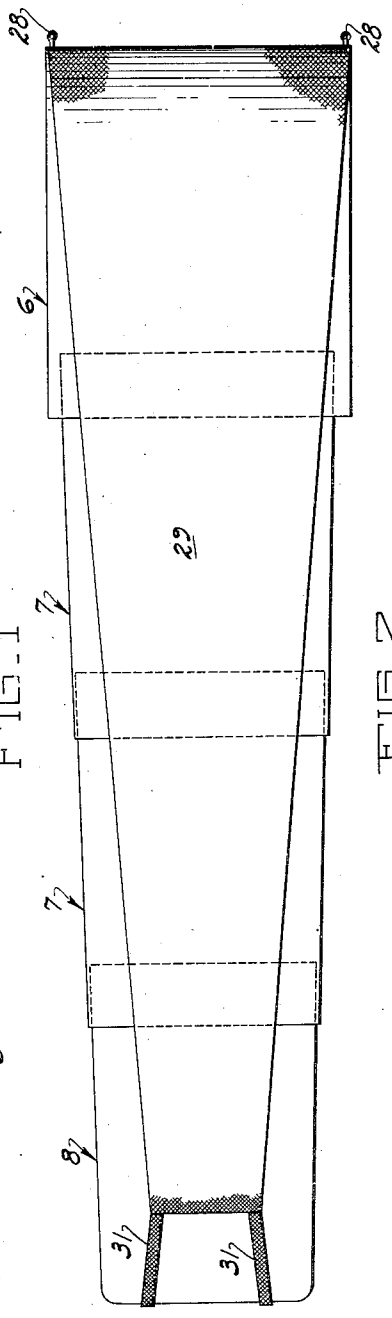


FIG. 2

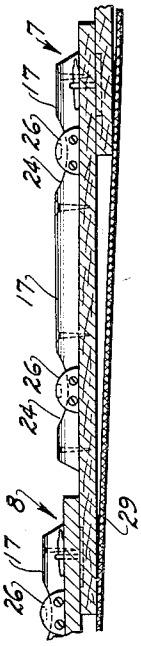


FIG. 4

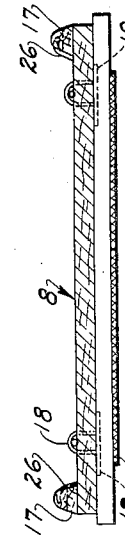


FIG. 3

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KNOCKDOWN TOBOGGAN

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2 Claims. (Cl. 280—18)

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This invention relates to sliding devices in the nature of a toboggan.

It is an object of the invention to provide a toboggan which may be disassembled into a comparatively compact unit.

Another object of the invention is to provide a toboggan especially adapted to the emergency transportation of physically incapacitated persons.

A further object of the invention is to provide, in a toboggan, a simple and effective brake which functions, to a desired degree, to offset gravital acceleration of the toboggan when the latter is descending grades.

Still another object of the invention is to provide a toboggan possessed of a certain degree of longitudinal pliability which enables it to follow and conform with normal undulations in the contour of the surface to be traversed.

The invention possesses other objects and features of advantage which, together with the foregoing, will be specifically set forth in the detailed description of the invention hereunto annexed. It is to be understood that the invention is not to be limited to the specific form thereof herein shown and described as various other embodiments thereof may be employed within the scope of the appended claims.

Referring to the drawing:

Figure 1 is a perspective view of the toboggan of my invention.

Figure 2 is a bottom plan view of the toboggan.

Figure 3 is a vertical sectional view of the toboggan taken in the plane indicated by the line 3—3 of Figure 1.

Figure 4 is a longitudinal vertical sectional view of the toboggan taken in the plane indicated by the line 4—4 of Figure 1.

It frequently happens, during cross-country ski excursions that a member of the party will become incapacitated due to illness or physical injury and in most instances it is imperative that the ailing party be returned immediately to the nearest habitat where relief or medical assistance can be obtained. The transportation of a person, particularly one who is suffering from a bone break or serious dislocation, places a serious burden on the unaffected members of the party since they must, first, carry the patient in such a way that the latter's injuries will not become aggravated and, secondly, hasten their return journey under the impediment created by the injured party in order that the group may gain their objective before nightfall and not suffer the experience of becoming lost in the darkness in unfamiliar terrain.

I have provided a special pack toboggan which is capable of being knocked down into a compact package no larger in size nor heavier than the average knapsack and which may be conveniently

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carried by a member of a party to anticipate just such emergencies as that described above or to serve as a carrier for woodland souvenirs or other articles that may be collected during a trip. Figure 1 best illustrates the complete structure of the toboggan which, it will be seen, is composed of a headboard section 6, a plurality of generally similar intermediate sections 7 and an end section 8 all of which are connected together to form a unitary structure. The headboard section 8 comprises a flat weatherproof plywood bottom portion 9, whose lower surface 11 forms part of the tread surface of the toboggan, rising in a coextensive upwardly curved portion 12 forming the bow of the toboggan. Side members 13, contoured to conform with the cross-sectional shape of the portions 9 and 12, are secured to the latter to preserve the form and relationship of the portions and to provide in the headboard a recess whose function will be presently explained.

Each intermediate section 7, and the end section 8, comprise substantially rectangular pieces 14 and 16 of weatherproof plywood, each having attached thereto, along its opposed side edges, rails 17 to lend longitudinal rigidity to the sections.

Means is provided for securing the respective sections together to provide a unitary toboggan structure. The rearward edge of the headboard and intermediate sections 6 and 7 are each provided with a pair of looped latch staples 18, each of which is mounted on a plate 19 secured by screws, or any other suitable means, to the upper surface of its respective section and these staples register with and are adapted to be received by apertures 21 provided in the forward edges of the end and intermediate sections 16 and 14 respectively. Sufficient of the staples project above the upper surfaces of the sections to provide tight drive fits for tapered keeper pins 22 each of which is attached to an adjacent portion of the section by means of a short length of chain 23 or other suitable cord-like material. Although the latches just described will securely bind the respective sections of the toboggan together, a certain amount of play will exist in the joints or will be created therein during use of the device. This is desirable in that it affords a certain degree of longitudinal flexibility in the toboggan which enables the latter to follow normal gentle undulations in the terrain over which it may be drawn.

Another desirable feature of the toboggan of my invention resides in the particular design wherein, as will be seen in Figure 2, the intermediate and end sections 7 and 8 are uniformly and progressively convergently tapered toward the rear of the toboggan. The normal posture assumed in riding a toboggan is to lay prone and face down on the device with the legs extend-

ing toward the rear. When steerage is desired, as the toboggan is under way, the rider spreads his legs so that his feet clear the sides of the toboggan and, by digging one or the other of his feet into the snow the toboggan may be made to swerge from side to side as desired. The standard toboggan has parallel sides and for the average person to repeatedly and unduly spread his legs so that his feet will clear the sides causes him considerable discomfort. By providing the improved toboggan of my invention with a rearwardly converging form, the leg spread for steerage is considerably lessened which contributes toward greater comfort.

Provision is made in the toboggan sections so that a bulky load, or the numerous wraps necessary to keep an injured or ill person warm, may be securely lashed thereto. Each of the rails **17** is provided with one or more depressions **24** in which hooks **26**, secured to the sides of the rails by screws **27** or other suitable means, are disposed. The construction is such that the top of each rail is unobstructed by any projections which might prove bothersome to a person moving his hands over the rails. The hooks **26** provide a plurality of anchors along the respective sides of the toboggan to which the ends or bights of lashing cords overlying the load may be secured.

The toboggan so far described may be employed for coasting although speeds comparable to that obtained in a conventional toboggan may not be attained due to the irregularities or steps in the tread surface produced by the overlapped sections. The greatest use for the device however is formed in providing emergency transportation wherein it is towed by two lines drawn by one or more persons preceding the toboggan. In many instances it is necessary to descend grades, some of which may be considerably inclined, and to retard the gravital action on the toboggan which would tend to cause the latter to overtake and pass the towing party I provide the toboggan with a speed arresting device which prevents it running away even on steep slopes. Provision is also made whereby the arrester or brake may be attached or detached as desired. Mounted on the outer curved surface of the bow portion **12** is a pair of transversely spaced studs **28** which may conveniently be eye-bolts to which the tow-lines may also be attached. The studs **28** are adapted to receive grommets provided at the end of a web **29** of coarse canvas, or other similar material, which extends rearwardly along the bottom or tread surface of the toboggan and terminates in one or more straps **31** which are passed over the rear edge of the end section **16** and are secured in buckles **32** mounted on the upper surface of the latter section. The coarseness of weave of the web **29** is a factor which governs the arresting power of the brake since snow will pack into the surface irregularities of the web and thereby provide a tread which introduces the requisite frictional resistance to sliding adequate to meet all normal needs. It will be noted that the web **29** converges rearwardly of the toboggan. This is done to provide the greatest retarding action at the forward end of the toboggan, which is desirable, the action then diminishing in proportion to the width of the web, toward the rear.

A very desirable and important feature of my invention resides in its capability of being

knocked down into a very compact bundle which is not considerably bulkier than an average knapsack and which may be carried just as comfortably. Each of the intermediate sections **14** and the end section **16** are designed so that their respective longitudinal dimensions do not exceed the diagonal distance between the rear edge of the headboard bottom portion **9** and the upper edge of the bow portion **12**. The widths of the sections of course, as will be seen from the drawing, are less than the spacing between the inner surfaces of the side members **13**. This permits the sections **14** and **16** to be disassembled, stacked one on the other and nested in the recess of the headboard wherein they may be securely held by wrapping the web **29** around the nested parts.

It is possible that variations in design and structure may become apparent to those skilled in the art after digesting the above detailed description of my invention. However many departures from the disclosed form may be made without digressing from the spirit of the invention, therefore, what I claim as new and desire to secure by Letters Patent is:

1. A toboggan comprising a headboard section having a flat tread element and members rising from margins of said tread element to provide a recess in the headboard, a plurality of separate body sections arranged in linear alignment adjacent said headboard section and latch elements for securing the sections together in a unitary assembly, and said body sections being sized and formed to fit, collectively, into said headboard recess.

2. A toboggan comprising a headboard section, an end section, and a plurality of intermediate sections interposed between the headboard and end sections, said headboard section and each intermediate section having adjacent its rearward edge a pair of upwardly rising looped latch devices, said end section and each intermediate section having provided therein adjacent its forward edge apertures to register with and to receive the looped latch devices of an adjacent section, and means carried by the respective end and intermediate sections and adapted for insertion through said latch devices when the latter are in said recesses for securing the headboard, end and intermediate sections together in a unitary assembly.

LAWRENCE C. BERG.

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