Dec. 19, 1944. A. M. COCHRAN 2,365,174

TOBOGGAN

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Fig. 1

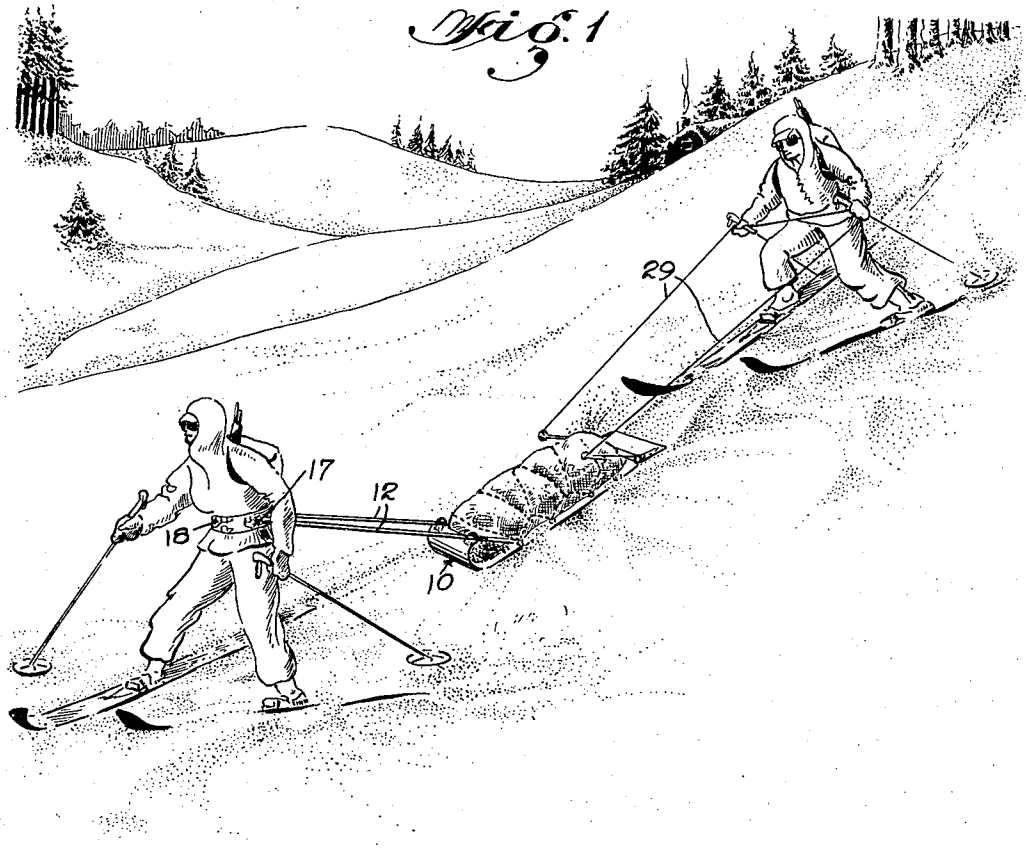


Fig. 2

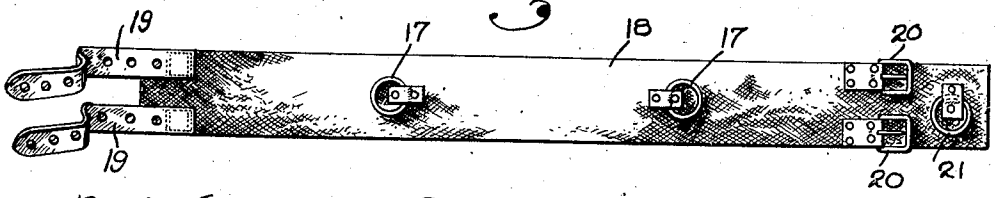
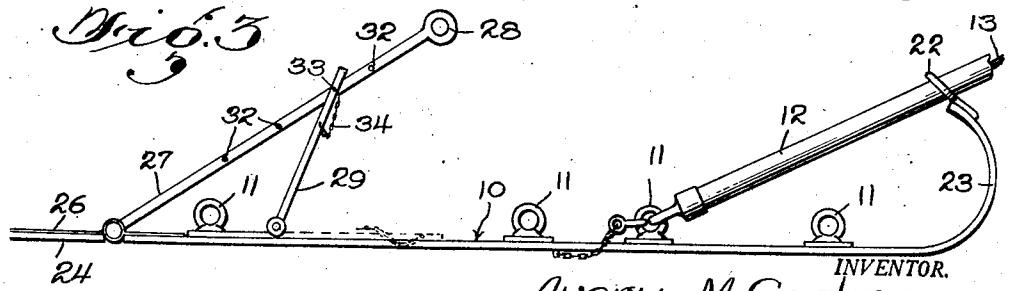


Fig. 3



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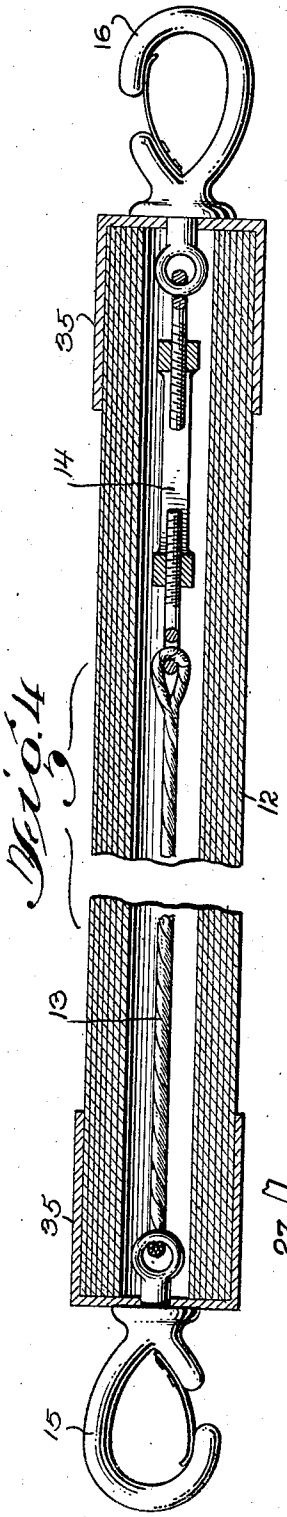


Fig. 4

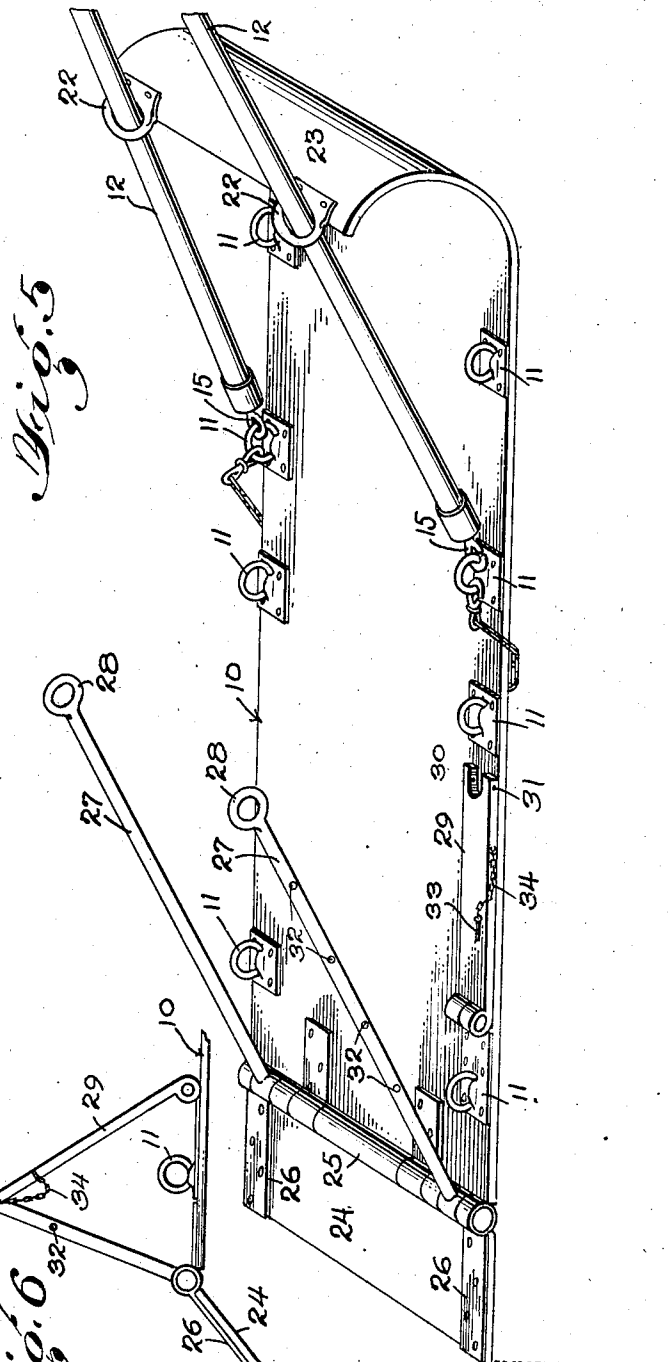


Fig. 5

Fig. 6

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TOBOGGAN

Avery M. Cochran, United States Army,
Colorado Springs, Colo.

Application May 4, 1943, Serial No. 485,617

5 Claims. (Cl. 280—18)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

The present invention relates to a toboggan, and more particularly to a novel form of toboggan which can be pulled and maneuvered by skiers.

This toboggan is primarily designed for use by military troops, but it can also be used by civilians on long ski tours.

The principal object of the invention is the provision of a toboggan which can be controlled by two persons, while wearing skis.

Another object of the invention is to provide a toboggan that is equipped with a brake that can be operated by a skier travelling in the rear of the toboggan.

A further object of the invention is to provide means for steering the toboggan at the same time it is being pulled.

A further object of the invention is to provide a toboggan that is of such a narrow gauge that it will ride in the tracks made by a ski column.

With the above and other objects and advantages in view, the invention consists of features of construction arrangement and operation of parts which will appear in the specification and be finally pointed out in the claims.

While the preferred embodiment of the invention is shown, it will be understood that slight changes in form and minor details of construction may be resorted to without departing from the spirit of the invention and fall beyond the scope of claims.

Referring now to the drawings in which similar characters and references in the several figures indicate identical parts:

Fig. 1 is a perspective view of the invention in use.

Fig. 2 is a plan view of the belt worn by the lead man.

Fig. 3 is a side view of the toboggan.

Fig. 4 is a longitudinal sectional view of the toboggan shaft.

Fig. 5 is a perspective view of the toboggan showing the shafts broken away, and

Fig. 6 is a detailed fragmentary side elevation of the brake lever holding the brake in braking position.

Reference now being made to the drawings by numeral, 10 indicates the toboggan having plate rings 11 secured along the outer longitudinal edges thereof. Two light hollow laminated shafts 12, having positioned therein a tension cable 13 to which is attached a turnbuckle 14 for increasing the tension of cable 13, are provided in order that a skier can pull and guide the toboggan as well as hold it back when the toboggan is going down hill. The shafts 12 are connected to the plate rings 11 on the toboggan by means of snap hooks 15 which are attached to one end of the tension cable 13. A second pair of snap hooks 16 are connected to the turn buckle 14 and are adapted to be hooked into rings 17 which are secured to a belt 18 which is to be worn by the skier maneuvering the toboggan. The belt 18 is provided with tongues 19 and buckles 20 to secure the belt to the waist of the wearer. This particular belt was developed for this particular use and the rings 17 are positioned on the belt in such a manner that the movement of the wearer can easily control the toboggan. The tension cable 13 is provided in the center of the hollow shaft 12 in order to transmit the pull directly to the toboggan and the snap hooks 15 and 16 are adapted to bear against the ferrules 35 at the ends of the shaft 12. This construction permits light shafts to be used so there is not much weight added to the skier who must pull the toboggan. A ring 21 is provided on the front of the belt in case a tow or guide rope is used by the skiers in traversing mountains or heavy snow trails.

The shafts 12 are retained in correct position by guides or loops 22 which are secured to the sweep 23 of the toboggan 10. A brake 24 is connected to the rear of the toboggan 10 by means of a transverse hinge 25. The leaves 26 of the hinge 25 that are attached to the brake 24 are placed along the outer edges of the brake to strengthen the brake and thus prevent undue breakage of the brake, when travelling over rough terrain.

The leaves 26 are provided at the hinge portion 25 with brake control rods 27. The rods 27 have eyes 28 in the end thereof to which a cable 29 may be attached. This rope is provided so that a skier behind the toboggan can operate the brake and thus prevent the toboggan from over-running the tow or pull man in the front.

Provision is also made so that the toboggan can be operated by one man. This is accomplished by having a brake-set lever 29 hinged to one of the plate rings 11. The brake-set lever 29 has a forked end 30 which is adapted to receive the brake control rod 27. Openings 31 at the forked end 30 are adapted to correspond with the openings 32 in the brake control rods 27 in order that a pin 33 secured to the brake-set lever 29 by means of a chain 34 may be inserted in the openings 31 and 32 and thus retain the brake

control lever in any desired position. This combination is provided, therefor, so that the brake can be set by the operator and held in the set position by the pin and lever. If the brake is set before the toboggan is started down hill, the brake will operate almost as effectively as if a skier were operating it from the rear.

Under ordinary circumstances, the toboggan will be operated by two men. One to maneuver or pull the toboggan and one to act as brake man. Also, the brake man can use a tow rope attached to the ring 21 on the belt of the tow man to assist him in towing the toboggan.

There is thus provided a simple and effective toboggan that is easily handled and maneuvered by two men, and from the foregoing, it will be apparent that by the practice of the teachings of the present invention a toboggan is provided that combines the advantages of light weight, rugged construction and ease of operation together with the ease of adjustment of the essential parts thereof.

In these features, the preferred embodiment of the present invention illustrated in the drawings accompanying this specification are believed to represent the most desirable arrangement of structure, but it is recognized that the invention is capable of some variation and modification without departing from the spirit of the invention as defined by the appended claims.

Having thus described the invention what is claimed as new and desired to secure by United States Letters Patent is:

1. A toboggan having shafts attached to the front sweep for pulling said toboggan, a belt having rings thereon for receiving the ends of said shaft, said belt adapted to control the forward movement of said toboggan when worn by a person pulling said toboggan, a brake pivotally connected to the rear of said toboggan, brake control rods attached to said brake and means attached to said control brake rods for controlling said brake remotely.

2. A toboggan having means attached to the front sweep for pulling said toboggan, said means comprising a hollow shaft, a tension cable positioned therein, tension means attached to said tension cable, a brake secured to the rear end of said toboggan, brake control means attached to said brake and means for controlling said toboggan from a distance attached to said brake control means.

3. A toboggan having means attached to the front sweep for pulling said toboggan, said means comprising a hollow shaft, a tension cable positioned therein, tension means attached to said tension cable, a brake secured to the rear end of said toboggan, brake control means attached to said brake and means for setting and holding said brake in any desired position.

4. A toboggan having rigid shafts attached to and extending forwardly from its front and attachable to a person ahead of the toboggan whereby the person may pull the toboggan and resist its forward movement through the interposed shafts, a brake operably supported by the toboggan, and means attached to the brake and controllable by a person behind the toboggan to apply the brake to resist forward movement of the toboggan.

5. A toboggan having rigid shafts attached to and extending forwardly from its front and attachable to a person ahead of the toboggan whereby the person may pull the toboggan and resist its forward movement through the interposed shafts, a brake operably supported by the toboggan, and means for locking the brake in a selected fixed braking position to resist forward movement of the toboggan independently of the rigid shafts, the degree of braking action being determined by the selected fixed braking position.

AVERY M. COCHRAN.