April 22, 1941. C. E. ARTMAN 2,239,213

SKI HORSE

Filed April 27, 1940 2 Sheets-Sheet 1

Fig. 1

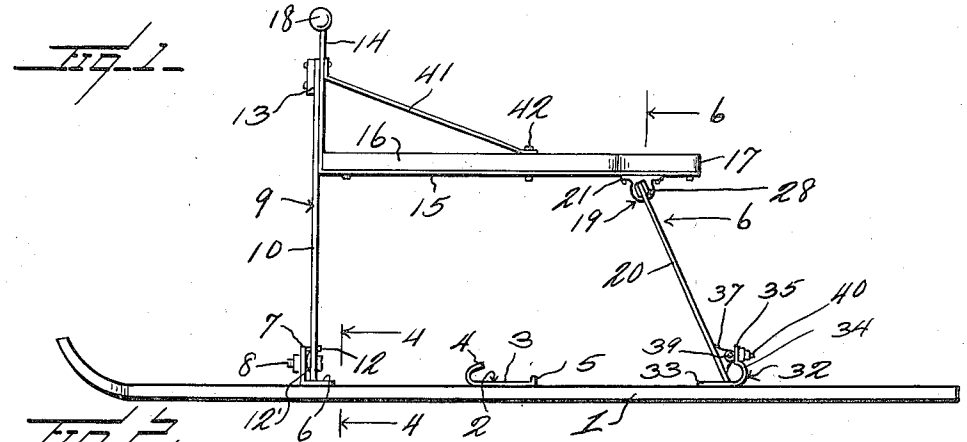


Fig. 2

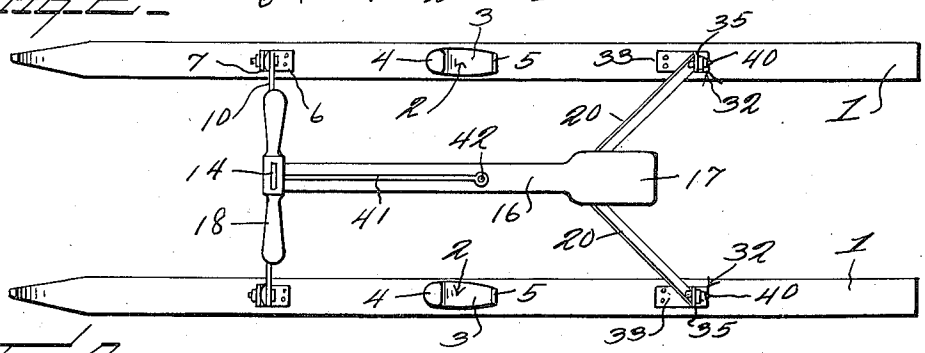


Fig. 4

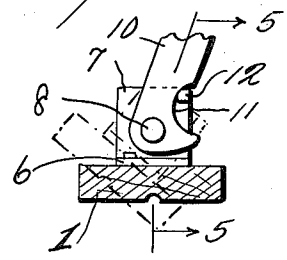


Fig. 5

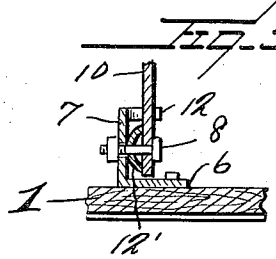


Fig. 3

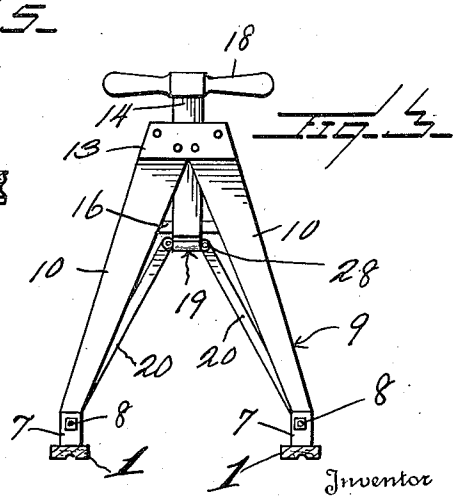
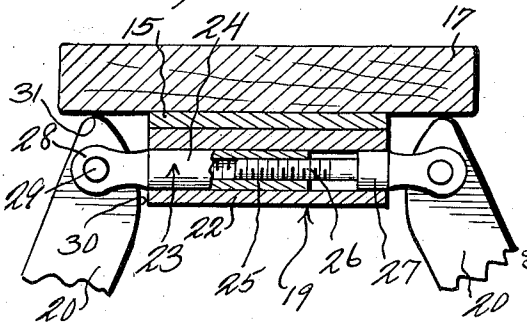


Fig. 6



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April 22, 1941. C. E. ARTMAN 2,239,213

SKI HORSE

Filed April 27, 1940 2 Sheets-Sheet 2

Fig. 9

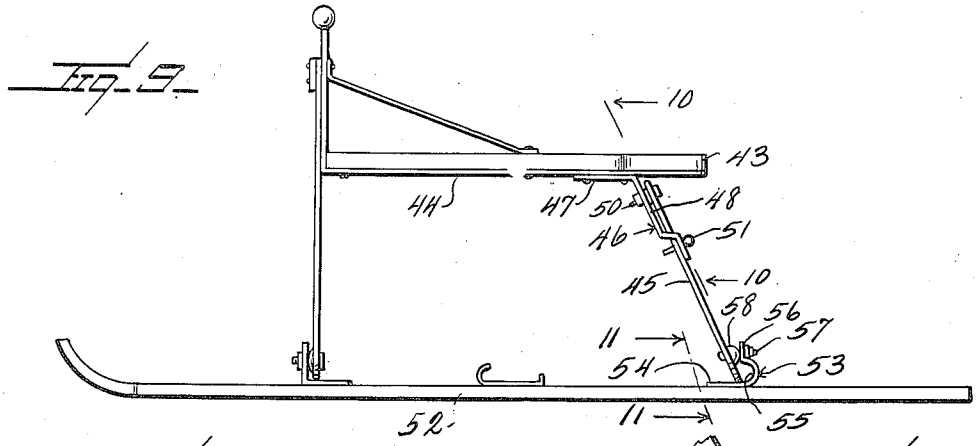


Fig. 10

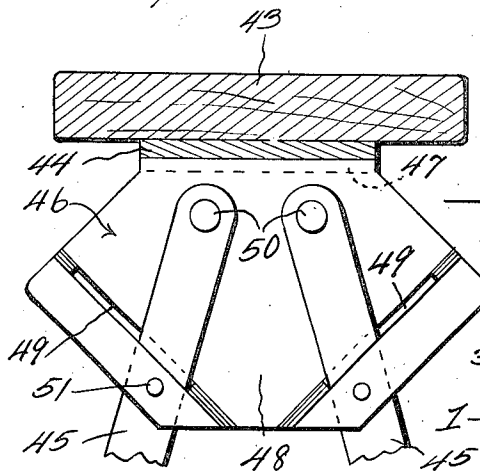


Fig. 11

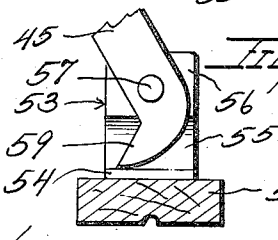


Fig. 7

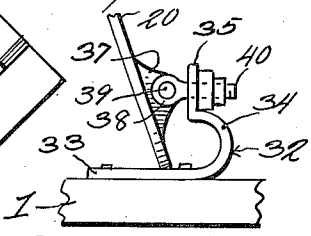


Fig. 8

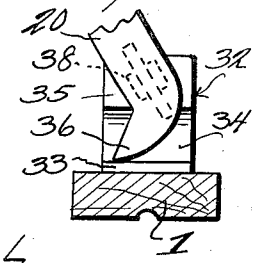


Fig. 12

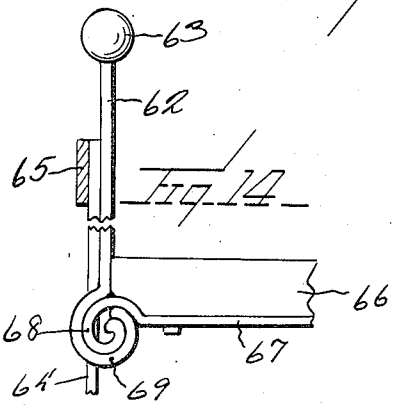


Fig. 13

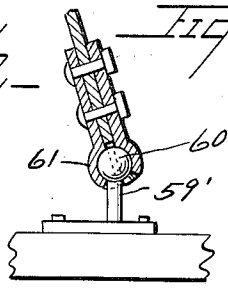
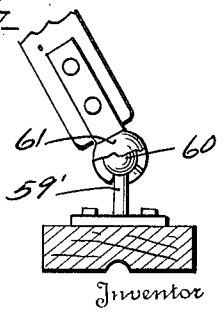


Fig. 14



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UNITED STATES PATENT OFFICE

2,239,213

SKI HORSE

Charles E. Artman, Spokane, Wash.

Application April 27, 1940, Serial No. 332,086

16 Claims. (Cl. 280—23)

This invention relates to the class of amusement devices and pertains particularly to a ski horse.

The primary object of the present invention is to provide a novel mechanical device connected to a pair of standard skis by means of which the skis are automatically held in a desired fixed relationship to each other but are at the same time permitted controlled manipulation by the rider or operator so as to accomplish the movements and changes of actual skiing.

Another object of the invention is to provide a ski horse wherein a pair of standard skis are joined together by a mechanism which normally functions to hold the skis in spaced parallel relation but which may be manipulated by the rider either while standing erect in the usual manner or while stooping or sitting upon the connecting mechanism, whereby the skis may be made to assume various positions relative to one another to enable the rider to control the movements of the skis in a manner similar to that used in the ordinary well-known way.

A further object of the invention is to provide a ski horse which is so designed as to provide a means of controlled skiing either for adults or children and for beginners, to provide a means of instructing in ski technique and to provide a novel and safe device for downhill coasting for children and adults, particularly where soft, deep snow is present.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification, with the understanding, however, that the invention is not to be confined to any strict conformity with the showing of the drawings but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Fig. 1 is a view in side elevation of one form of the ski horse embodying the present invention.

Fig. 2 is a view in top plan of the same.

Fig. 3 is a view in front elevation of the same.

Fig. 4 is a sectional view on the line 4—4 of Fig. 1.

Fig. 5 is a sectional view on the line 5—5 of Fig. 4.

Fig. 6 is a sectional view on the line 6—6 of Fig. 1.

Fig. 7 is a view in side elevation on an enlarged scale of a rear leg bottom joint.

Fig. 8 is a view in elevation of the bottom joint of Fig. 7, looking toward the rear of the ski.

Fig. 9 is a view in side elevation of a modified or junior form of the ski horse.

Fig. 10 is a sectional view on the line 10—10 of Fig. 9.

Fig. 11 is a sectional view on the line 11—11 of Fig. 9.

Fig. 12 is a detailed sectional view of a modified bottom joint for a rear leg of the structure of Fig. 1.

Fig. 13 is a view of the joint of Fig. 12 partly broken away, and taken at right angles to Fig. 12.

Fig. 14 is a detail view illustrating a folding connection between a saddle bar and the front legs of the horse.

Referring now more particularly to the drawings, the skis of standard form which form a part of the present device, are indicated by the numeral 1. Each of these skis is provided with a suitable foot stirrup indicated generally by the numeral 2. Such stirrup may be constructed in a suitable manner to facilitate adjusting the lengths and widths of the same to fit the operator's boot, but the stirrup here shown is merely conventionally illustrated as being in the form of a plate 3 having an upwardly and rearwardly curving forward end toe portion 4 and an upturned flange 5 at its rear end against which the rear of the heel may engage when the toe is in the holder 4. Any suitable means may be provided to facilitate connection of the foot securing binding therewith.

Forwardly of each foot stirrup each ski has secured to the top thereof the flat plate portion 6 of an angular hinge bracket which is provided with an upstanding or vertical portion 7 which extends transversely of the ski. Such vertical portion of the bracket is provided with a suitable aperture for the loose reception of a pivot bolt 8.

The numeral 9 generally designates an upstanding frame of substantially V-form, such frame having the two divergently related legs 10 which, with the frame in operative position, diverge downwardly and each terminates at its lower end adjacent the rear face of the vertical portion 7 of a hinge bracket. This inverted V-frame 9 is formed of a suitable weight of flat metal of a suitable degree of flexibility so that each of the legs 10, while maintaining the normal straight condition, may be bent or torsionally twisted in the manipulation of the device, as hereinafter more specifically described. It is pre-

ferred that the legs 10 be tapered from a maximum width at the top to a minimum width at the bottom. The widths of the legs 10 are disposed transversely of the skis as shown in Fig. 3. This is essential in order that the points of attachment be maintained at a constantly fixed distance apart by the two rigidly spaced legs so that the pivoting points of the skis shall remain a constant distance apart except at the times when the skis are given forward and backward movement.

Each of the legs 10 at its lower end is provided with a suitable aperture to receive the pivot bolt 8 by which it is connected with the hinge bracket and the inner side of each leg is provided with a notch 11 adjacent the pivot bolt 8. Extending from the rear face of the plate 7 is a stop lug 12 which, in the normal position of the leg, engages the notch 11 at the upper part thereof, but when the ski is tilted or rocked on its long axis, it engages the lower end of the notch 11, as shown in Fig. 4 to limit the rocking movement of the ski with respect to the leg. To provide for a limited rotation of the skis about the vertical axes of the front legs when the rear ends of the skis are spread, there is provided a convex washer 12' which is inserted, on the bolt, between the leg and the vertical portion 7 of the bracket, and such rotation of the legs is also facilitated by torsional flexing of the leg itself.

Secured across the top ends of the legs 10 is a vertical plate 13 and to a vertical face of this plate is secured a rigid upright 14 which is disposed centrally between the legs and at its lower end merges with a rearwardly extending horizontal portion 15, upon the top of which is secured the longitudinally extending saddle bar 16 which is preferably of wood. This saddle bar at its rear end is enlarged suitably to provide the saddle 17.

Upon the upper end of the rigid upright 14 above the joined upper ends of the legs 10, is secured the transverse handle bar 18.

The portion 15 which is integral with the rigid upright 14 and the saddle bar 16 constitute a single fixed unit. Secured to the under side of this unit at the rear end of the saddle bar, beneath the saddle 16, is a universal joint unit indicated generally by the numeral 19, to which are coupled in the manner about to be described, the upper ends of the rear downwardly and rearwardly diverging legs 20.

The universal joint unit in the form illustrated upon the structure of Fig. 1, comprises a plate 21 which is bolted or otherwise suitably secured to the under side of the member 15, and to this plate is fixed, to extend transversely of the saddle 17, a cylinder or tubular guide 22. Within the tubular guide is a two-part link 23 in which one part, indicated by the numeral 24, is provided from one end with a threaded bore or passage 25 into which is threadably engaged, the threaded end portion 26 of the other part of the link, which is indicated by the numeral 27. Each of these links at its outer end is formed to provide a clevis 28 across which a pivot pin 29 extends. The foregoing describes one form of universal joint which may be employed and which as shown, facilitates ready dismantling of the structure, but it will be understood that it is within the purview of the present invention to use any other suitable type of joint for coupling the rear legs to the saddle bar, which will permit the skis to be given the desired movements.

The upper end of each rear leg 20 positions within a clevis 28 and is traversed by the pivot pin 29 and each of these legs is cut obliquely at the end adjacent the pivot pin 29, as indicated at 30. This obliquely-cut edge is slightly outwardly rounded and moves in close proximity to the adjacent end of the guide cylinder 22. As a result of the oblique cutting of the ends of the legs 20, there is formed at the upper end of each, the tip or point 31 which, when the leg is swung laterally or outwardly, moves inwardly and engages the adjacent end of the cylinder 22 and of the member 15, and thus limits the lateral swinging of the leg. With this coupling for the upper ends of the legs 20 with the rear portion of the ski supported frame structure, it will be seen that these legs may be swung independently laterally with respect to the skis or forwardly or rearwardly, as may be desired, such forward and rearward swinging being permitted by the threaded connection between the two parts of the link 23, and also because of the exterior circular form of the link, it will be seen that it may oscillate or turn as a unit on its long axis within the cylinder 22 for the performance of certain hereinafter described movements of the frame structure with respect to the skis. The lower end of each rear leg is secured to the top of a ski at a point somewhat rearwardly of a vertical line dropped from the rear end of the saddle 17, by a universal foot coupling which is indicated generally by the numeral 32. Each foot coupling for the lower end of a leg 20 comprises a plate 33 which is bolted to the top of the ski and which at its rear end is shaped to provide the rearwardly and upwardly curving bow 34 which terminates in a vertical upper portion 35.

Upon the lower end of each rear leg 20, the width of which leg extends in a plane transversely of the ski, there is formed or secured upon the inner side or inner edge the stout downwardly extending spur 36 and just above this spur upon the rear face of the leg is an ear 37 which engages in a clevis 38 and is traversed by a pivot bolt 39 which passes through the clevis. This clevis has a shank 40 which passes through the vertical portion 35 of the bracket and is secured thereto to hold the clevis in operative position upon the front face of the bracket. This clevis and ear assembly allows for the forward and rearward movement of the leg, and the shank portion of the clevis, turning in the upper part 35 of the bracket, functions as a hinge to permit the leg to oscillate transversely of the ski. The spur 36 limits the oscillation of the leg inwardly and serves, upon impingement against the plate 33, to facilitate the rocking of the ski on its long axis so as to force the inner edge of the ski downward as it moves outwardly so that the frictional and braking effect of the ski against the snow surface is increased by this action.

In order to brace the saddle bar 16 with the rigid upright 14 to which the handle bar is attached, there is provided the brace rod 41 which at one end is secured to the upper part of the vertical rigid bar 14 and extends rearwardly and downwardly to be attached at its rear end, as indicated at 42, to the saddle bar substantially midway of its ends or somewhat rearwardly of the transverse center thereof.

The construction thus far described for the ski horse is designed particularly for adult use, therefore, it might be referred to as the senior form or model of the invention.

In the use of the ski horse, the rider stands astraddle the seat bar 16 with his feet secured in

the stirrups 2, leaning slightly forwardly as is customary in the ordinary use of skis for sliding downhill or traveling forwardly. If the ski horse is on a level surface, the operator, standing as described, balances his weight on the balls of his feet and on the handle. The broad base provided by the distance between the two parallel skis reinforced by the bracing of the operator's legs, aids in maintaining balance sideways. The rider may then move his legs forward alternately until a sloping surface is reached and as he descends the sloping surface by gravity and the speed of movement increases, he may bring the weight of his body backward on his heels and to the rear portions of the skis by crouching backward as in actual skiing. If the operator desires to check his speed, he bends the knees and crouches further, at the same time pulling backward on the handle. This backward and downward pressure is effective on the rear of the center bar or saddle bar to force the rear legs outward with the skis and the inner ski edges downward, forming the "snow plow position" of actual skiing. By crouching still further, the weight of the rider's body is brought to bear against the saddle 17, thereby increasing the outward pressure on the skis for steep descents or on a long sustained slope, thus relieving the fatigue and strain on the operator's legs from the prolonged snow plowing position.

In order to change the direction of travel, the rider while maintaining his initial upright position, shifts his weight to the ski on the outside of the intended turn and pulls backward on the handle 18, edging the outside ski and forcing the unit or ski horse to turn in the desired direction, by a movement of parts similar to that involved in a "stem turn" in actual skiing.

The swivel construction that connects the lower ends of both front and rear legs to the skis also permits independent rotation or turning of ski edges downward by the ankle motion of the operator's feet in the stirrup.

In effecting the running or traverse motion of the ski horse, the operator in moving his legs forwardly and rearwardly alternately as first described, alternately shifts his body weight as in actual ski traversing. The handle 18 takes the place of the ordinarily used ski poles for balancing the rider's body.

As a modification of the construction thus described to provide a structure suitable for children or persons learning the use of skis, the rear legs are attached to the under side of the saddle by a modified joint such as is illustrated in Fig. 10, and a slight modification is also made in the joint coupling the rear end of each rear leg with a ski, such a modified joint being illustrated in Fig. 11. The same joint construction would be employed for coupling the front legs with the skis as already described.

In the illustration of the swivel joint connection between the rear legs at the upper ends and the saddle portion of the device, the saddle is indicated generally by the numeral 43 while the reinforcing bar extending longitudinally of the under side thereof and corresponding with the bar 15, is indicated by the numeral 44. The rear legs for this modified construction are indicated by the numeral 45 and the coupling between these legs and the bar 44 is indicated as a whole by the numeral 46. This coupling comprises a plate member 47 which is secured horizontally to the under side of the bar 44 and a downwardly and rearwardly extending plate 48 in which is formed the upwardly and outwardly diverging guide slots 49. The upper ends of the legs 45 pass through these slots 49 and are pivotally secured in relatively close relation, to the plate 48 by pivot pins 50 which permit the legs to swing laterally within the confines of the slots 49 in which they lie. The normal positions for the legs 45 is at the inner or adjacent ends of the guide slots 49, and where it is desired to use the ski horse solely for sliding or coasting, a locking pin 51 may be passed through each leg and through the plate 48 to secure the legs against lateral movement.

The lower ends of the legs 45 are attached to the skis, one of which is illustrated and indicated by the numeral 52, by a hinge joint 53 which permits of the lateral rocking of the ski or the turning of the ski on its long axis, but does not permit of the forward and rearward movement of the ski as in the case of the joint 32 which is employed in the adult or senior form of the invention. This joint 53 consists of the horizontal plate 54 which is secured to the ski, the upwardly and forwardly curving portion 55, and the vertical terminal portion 56 against the forward face of which the lower end of the leg 45 positions. A pivot bolt 57 passes through the leg 45 and the adjacent vertical portion 56 of the bracket, and carries a convex spacing washer 58 corresponding with the washer 12' and functioning to allow for a very slight forward and rearward movement of the ski.

The lower end of each leg 45 is provided upon its inner side or edge with a spur 59 which impinges against the plate 54 when the legs are spread, thus forcing the inner edge of the ski downward so as to rock or turn the ski on its long axis.

In the operation of the junior or modified form of the ski horse, substantially the same movements of the skis can be obtained, except that the running or traverse movements of the skis cannot take place and, therefore, when the rider desires to start the skis over a level surface toward a slope, it is necessary for him to remove one foot from the stirrup and push backward against the snow to effect the forward movement of the ski horse. The basic movements which are possible with the senior form of the construction are also possible with the junior form, by similarly rotating the ski edges through ankle action and by shifting the body weight from one ski to the other.

As an alternative construction of the swivel or universal coupling between the lower ends of the rear legs and the skis, the arrangement shown in Fig. 12 may be employed, wherein each ski is provided with a post 59' having a head 60 upon its upper end and the lower end of each leg has secured thereto a socket 61 which receives the head or ball 60. The opening described by the lips of the socket is such that when the legs are in the normal relation, the edge of the socket opening will bear against the inner side of the post 59', so that when the legs are spread, the desired turning of the ski will be effected to accomplish the downward edging of the skis against the snow, as described in connection with the functioning of the spurs 36 and 58 of the previously described rear leg foot connections.

Fig. 14 illustrates an alternative method of coupling the saddle bar with the handle-carrying vertically disposed rigid bar 14, by means of which folding of the ski horse may be accomplished. The handle-supporting rigid upright member, corresponding to the member 14, is here indicated by the numeral 62, carrying a handle 63 upon its upper end while the upper portions

of the front legs corresponding to the legs 13, are indicated by the numeral 64, these legs being connected together by the transverse plate 65 to which the handle supporting upright 62 is attached. The forward end portion of the saddle bar is indicated by the numeral 66 and upon the under side thereof is the longitudinally extending reinforcement 67 corresponding to the bar 15 of Fig. 1, which in that figure is an integral part of the rigid upright 14. In the present case, however, the forward end of the saddle bar reinforcing bar 67 is rolled or curved downwardly and rearwardly as indicated at 68, while the lower end of the rigid handle supporting bar 62 is also rolled or coiled, as indicated at 69, and these coils are interconnected so as to form an interlocking coil hinge of the character shown. While this is the preferred method of hingedly coupling the forward end of the saddle bar with the legs and handle supporting bar, any other suitable hinge coupling may be employed which is sufficiently strong and which will not allow side play. Obviously also it is necessary that such hinge construction be such that it will permit rotating the upright element 62 and the legs and other parts connected therewith forward through an angle of 90° so as to permit the front legs to be folded backward in a plane parallel with and close to the bar 67.

While the coils 68 and 69 have been illustrated and described as being formed directly from the parts 67 and 62, respectively, it is obvious that they might be separately formed and secured to these parts.

In the folding of the ski horse for storage or transportation, the brace bar connecting the upper part of the handle supporting member 62 with the saddle bar 66 will, of course, be removed and also the bolts coupling the lower ends of the front legs with the bracket plates 7 will be removed, so as to permit the movement of the front legs independently of the skis. The rear legs will be rotated or turned about the link 23 as a center to lie against the saddle bar and the reinforcing center bar extending along the under side thereof. In the junior form of the invention, it would be necessary to remove the pivot bolts 57 which couple the lower ends of the legs 45 with the pivot brackets 53.

From the foregoing, it will be readily apparent that the device herein described provides a novel means of instruction in ski technique, which provides a mechanical device for controlled skiing for adults generally and for children or beginners, and which also provides a novel, safe device for downhill coasting both for children and adults, which is particularly adapted to soft, deep snow.

What is claimed is:

1. An amusement device of the character described, comprising a pair of skis, a pair of leg members pivotally attached to and spaced longitudinally of each ski, means carried by each ski between the pair of leg members facilitating engagement of the foot with the ski, a connecting means between the two pairs of leg members, the front leg member of each pair being of a construction to be flexed upon the forward and rear movement of the ski and a pivotal connection between the upper ends of the rear leg members only and said connecting means.

2. An amusement device, comprising a pair of skis, a pair of front leg members each pivotally attached to a ski at its lower end, the upper ends of said members being rigidly joined together, a handle carried by said pair of leg members, a pair of rear leg members each pivotally attached at its lower end to a ski, a member attached to the front pair of leg members and extending rearwardly therefrom, a pivotal connection between said member and the upper end of each of said rear legs, and means carried by each ski between the front and rear legs attached thereto facilitating connection of a foot with the ski.

3. An amusement device, comprising a pair of skis, a pair of front leg members each pivotally attached to a ski at its lower end, the upper ends of said members being rigidly joined together, a handle carried by said pair of leg members, a pair of rear leg members each pivotally attached at its lower end to a ski, a member attached to the front pair of leg members and extending rearwardly therefrom, a pivotal connection between said member and the upper end of each of said rear legs, and means carried by each ski between the front and rear legs attached thereto facilitating connection of a foot with the ski, the said pivotal connection between each front leg member and a ski having the pivot axis thereof extending longitudinally of the ski and each of said front leg members being of a resilient character whereby it may be flexed and torsionally twisted.

4. An amusement device, comprising a pair of skis, a pair of front leg members each pivotally attached to a ski at its lower end, the upper ends of said members being rigidly joined together, a handle carried by said pair of leg members, a pair of rear leg members each pivotally attached at its lower end to a ski, a member attached to the front pair of leg members and extending rearwardly therefrom, a pivotal connection between said member and the upper end of each of said rear legs, and means carried by each ski between the front and rear legs attached thereto facilitating connection of a foot with the ski, the said pivotal connections between the lower ends of the rear legs and the skis and between the upper ends of the rear legs and said rearwardly extending member being constructed and arranged to facilitate forward and rearward and lateral movement of the legs and the rear ends of the skis.

5. An amusement device, comprising a pair of skis, a pair of front legs formed of a flat resilient material and each pivotally connected at its lower end with a ski for movement relative to the ski on an axis extending longitudinally of the ski, the widths of said legs extending transversely of the skis, a handle bar secured to the upper ends of said legs, a horizontal bar secured at one end to said legs adjacent their upper ends and extending rearwardly therefrom, a pair of rear legs, a pivotal connection between the lower end of each rear leg and a ski, a pivotal connection between the upper end of each rear leg and said rearwardly extending bar, and means carried by each ski between the front and rear leg attached thereto facilitating the attachment of a foot to the ski.

6. An amusement device, comprising a pair of skis, a pair of front legs formed of a flat resilient material and each pivotally connected at its lower end with a ski for movement relative to the ski on an axis extending longitudinally of the ski, the widths of said legs extending transversely of the skis, a handle bar secured to the upper ends of said legs, a horizontal bar secured at one end to said legs adjacent their upper ends and extending rearwardly therefrom, a pair of rear legs, a pivotal connection between the lower end of each rear leg and a ski, a pivotal connection between the upper end of each rear leg and

said rearwardly extending bar, means carried by each ski between the front and rear leg attached thereto facilitating the attachment of a foot to the ski, said front legs being adapted for forward and rearward flexing and for torsional flexing, and the pivotal connections between the lower ends of the rear legs and the skis and between the upper ends of the rear legs and said bar being of a universal character whereby the skis may be relatively moved forwardly and rearwardly and may have their rear ends relatively moved laterally.

7. An amusement device of the character described, comprising a pair of skis, a front leg for each ski, each front leg consisting of an elongated relatively wide flat bar of highly resilient material disposed with its width extending transversely of the ski, a pivotal connection between the lower end of each front leg and the adjacent ski by which the ski may be oscillated on its long axis, connecting means between the upper ends of the front legs, a handle bar carried by said connecting means, a saddle bar connected at one end with said legs and extending rearwardly therefrom, a pair of rear legs, a bracket secured to each ski rearwardly of the front leg thereon, a coupling between each bracket and a rear leg facilitating universal movement of the leg relative to the bracket, a coupling between the upper end of each rear leg and said saddle bar facilitating universal movement of the rear leg with respect to the bar, a brace connecting the upper ends of the front legs with the saddle bar, and means carried by each ski between the front and rear legs for connecting a foot with the ski.

8. An amusement device of the character described, comprising a pair of skis, a front leg for each ski, each front leg consisting of an elongated relatively wide flat bar of highly resilient material disposed with its width extending transversely of the ski, a pivotal connection between the lower end of each front leg and the adjacent ski by which the ski may be oscillated on its long axis, connecting means between the upper ends of the front legs, a handle bar carried by said connecting means, a saddle bar connected at one end with said legs and extending rearwardly therefrom, a pair of rear legs, a bracket secured to each ski rearwardly of the front leg thereon, a coupling between each bracket and a rear leg facilitating universal movement of the leg relative to the bracket, a coupling between the upper end of each rear leg and said saddle bar facilitating universal movement of the rear leg with respect to the bar, a brace connecting the upper ends of the front legs with the saddle bar, means carried by each ski between the front and rear legs for connecting a foot with the ski, the said universal coupling between the upper ends of the legs and the saddle bar comprising a guide sleeve secured transversely of the saddle bar, a two-part link extending transversely through the guide means and adapted to rotate as a unit therein and having the two parts thereof coupled for relative rotation, and a pivotal connection between the outer end of each part of said link and the upper end of a rear leg.

9. An amusement device of the character stated, comprising a pair of skis, a bracket carried by each ski and supporting a longitudinally extending pivot pin, a front leg pivotally attached at one end to each pivot pin, each front leg being of a resilient character permitting its bending and torsional twisting, means limiting the oscillation of each leg in one direction upon the pivot pin, a second bracket carried by each ski rearwardly of the first bracket, a pivot pin carried by each second bracket, a rear leg connected at one end to each second bracket pivot pin, means limiting the oscillation of each rear leg in one direction transversely of the adjacent ski, a rigid coupling between the upper ends of the front legs, a handle carried by said rigid coupling, a horizontal rigid member secured at one end to said rigid coupling and extending rearwardly, a pivotal connection between the upper end of each rear leg and said horizontal connection, and means carried by each ski between the pair of brackets thereon for connecting a foot with the ski.

10. An amusement device, comprising a pair of skis, a pair of upwardly converging front legs each pivotally attached at its lower end to a ski whereby the ski may have limited rocking movement on its long axis relative to the leg, a handle connected to the convergent upper ends of the front legs, a horizontally disposed saddle bar, means coupling the forward end of the saddle bar with the upper ends of said legs, a brace connecting the upper ends of the legs with the saddle bar, a pair of rear legs, a pivotal connection between an end of each rear leg and a ski, said rear legs extending rearwardly in downwardly divergent relation from the rear end of said saddle bar, a pivotal connection between the upper ends of said rear legs and the saddle bar, and means carried by each ski between the front and rear legs attached thereto facilitating the attachment of a foot to the ski.

11. An amusement device, comprising a pair of skis, a pair of upwardly converging front legs each pivotally attached at its lower end to a ski whereby the ski may have limited rocking movement on its long axis relative to the leg, a handle connected to the convergent upper ends of the front legs, a horizontally disposed saddle bar, means coupling the forward end of the saddle bar with the upper ends of said legs, a brace connecting the upper ends of the legs with the saddle bar, a pair of rear legs, a pivotal connection between an end of each rear leg and a ski, said rear legs extending rearwardly in downwardly divergent relation from the rear end of said saddle bar, a pivotal connection between the upper ends of said rear legs and the saddle bar, and means carried by each ski between the front and rear legs attached thereto facilitating the attachment of a foot to the ski, the said connection between the forward end of the saddle bar and the upper ends of the front legs being of a pivotal character facilitating folding of the front legs and saddle bar into substantially parallel planes.

12. An amusement device of the character described, comprising a pair of skis, a pair of front leg members rigidly joined together at their upper ends and each pivotally connected at its lower end to a ski, said legs being of resilient material and of a form to resist bending in a direction transversely of the ski but capable of torsional twisting whereby the skis may be swung out at their rear ends, a pair of rear leg members each pivotally connected at its lower end to a ski, a body connected to the joined upper ends of the front legs and extending rearwardly therefrom, and a pivotal coupling between said body and the top end of each of the rear legs.

13. An amusement device of the character de-

scribed, comprising a pair of skis, a pair of front leg members rigidly joined together at their upper ends and each pivotally connected at its lower end to a ski, said legs being of resilient material and of a form to resist bending in a direction transversely of the ski but capable of torsional twisting whereby the skis may be swung out at their rear ends, a pair of rear leg members each pivotally connected at its lower end to a ski, a body connected to the joined upper ends of the front legs and extending rearwardly therefrom, and a pivotal coupling between said body and the top end of each of the rear legs, the said pivotal connection for the front legs being constructed to facilitate rocking of the skis on an axis extending longitudinally thereof.

14. An amusement device of the character described, comprising a pair of skis, a pair of front leg members rigidly joined together at their upper ends and each pivotally connected at its lower end to a ski, said legs being of resilient material and of a form to resist bending in a direction transversely of the ski but capable of torsional twisting, a pair of rear leg members each pivotally connected at its lower end to a ski, a body connected to the joined upper ends of the front legs and extending rearwardly therefrom, a pivotal coupling between said body and the top end of each of the rear legs, the said pivotal connection for the front legs being constructed to facilitate rocking of the skis on an axis extending longitudinally thereof, and cooperating means between the front legs and the skis limiting relative rocking movement of the skis and said front legs.

15. An amusement device, comprising a pair of skis, a pair of upwardly converging front legs each pivotally attached at its lower end to a ski, means at the lower ends of said legs for limiting the rocking movement of the ski on its long axis relative to the leg, a saddle bar extending longitudinally of the skis, means coupling the forward end of the saddle bar with the upper ends of said legs, a pair of rear legs, a pivotal connection between an end of each rear leg and a ski, said rear legs extending rearwardly in downwardly divergent relation from the rear end of said saddle bar, and a pivotal connection between the upper end of each of said rear legs and the saddle bar.

16. An amusement device, comprising a pair of skis, a pair of upwardly converging front legs each pivotally attached at its lower end to a ski whereby the ski may have limited rocking movement on its long axis relative to the leg, a saddle bar extending longitudinally of the skis, coupling means between the upper ends of the legs and an end of the saddle bar, a pair of rear legs, a pivotal connection between an end of each rear leg and a ski, said rear legs extending rearwardly in downwardly divergent relation from the rear end of said saddle bar, a plate member secured to the under side of the saddle bar adjacent its rear end and extending transversely of the bar and downwardly and rearwardly therefrom, said plate member having two divergently related slots through which the upper ends of said rear legs extend, and a pivotal connection between the upper end of each rear leg and said plate, said slots forming limiting means for the lateral swinging movement of said rear legs with respect to the plate.

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