April 9, 1946. J. HNAT 2,398,142

SKI-EQUIPPED WHEELBARROW

Filed Aug. 11, 1944 2 Sheets-Sheet 1

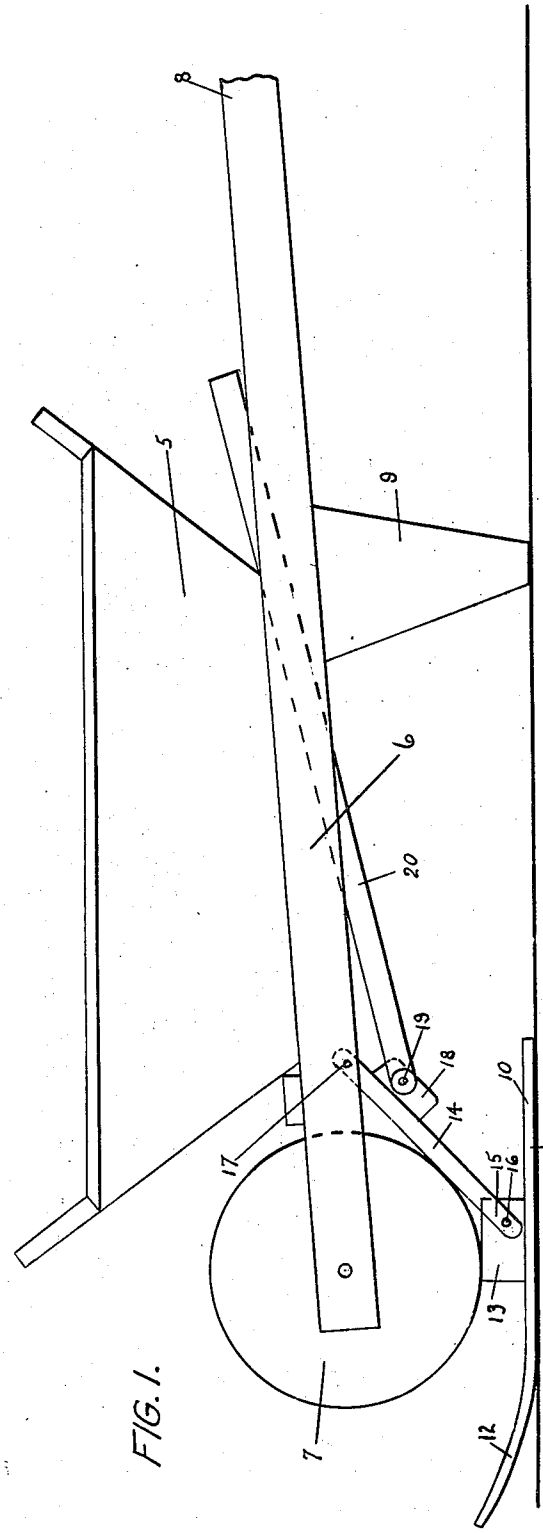


FIG. 1.

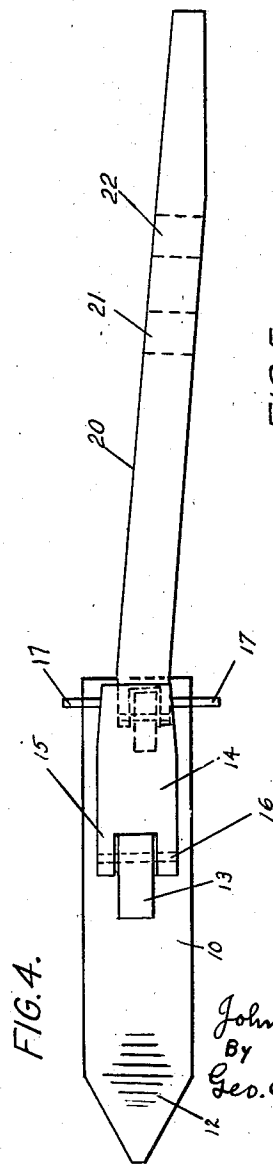


FIG. 4.

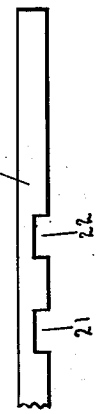


FIG. 5.

INVENTOR
John Hnat
By
Geo. E. Rendell
ATTORNEY

April 9, 1946. J. HNAT 2,398,142

SKI-EQUIPPED WHEELBARROW

Filed Aug. 11, 1944 2 Sheets-Sheet 2

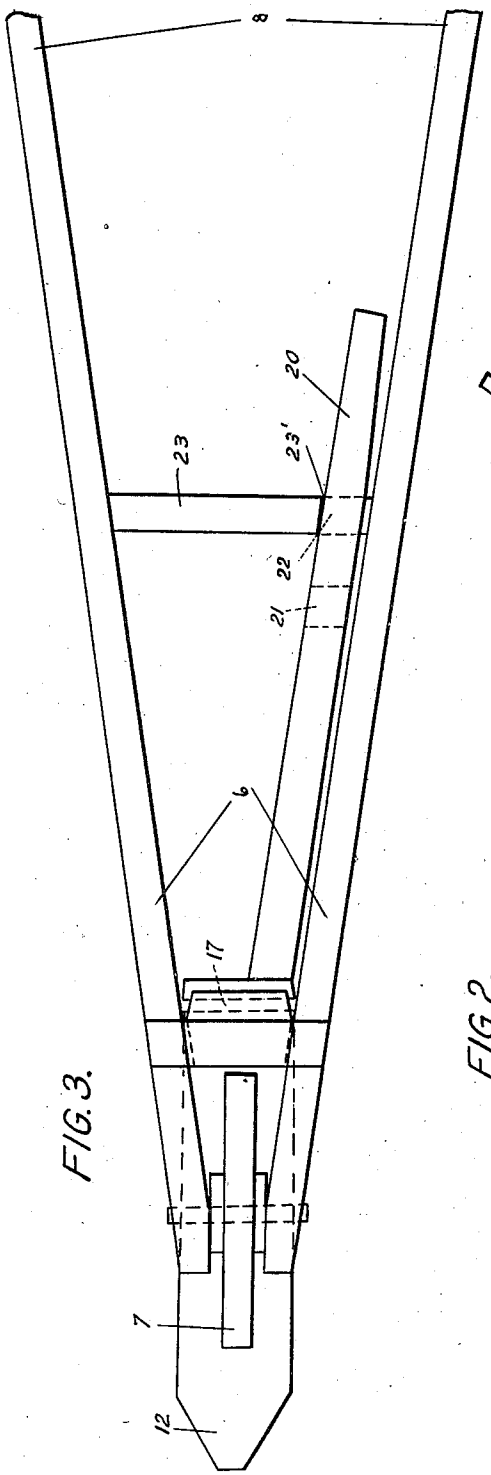


FIG. 3.

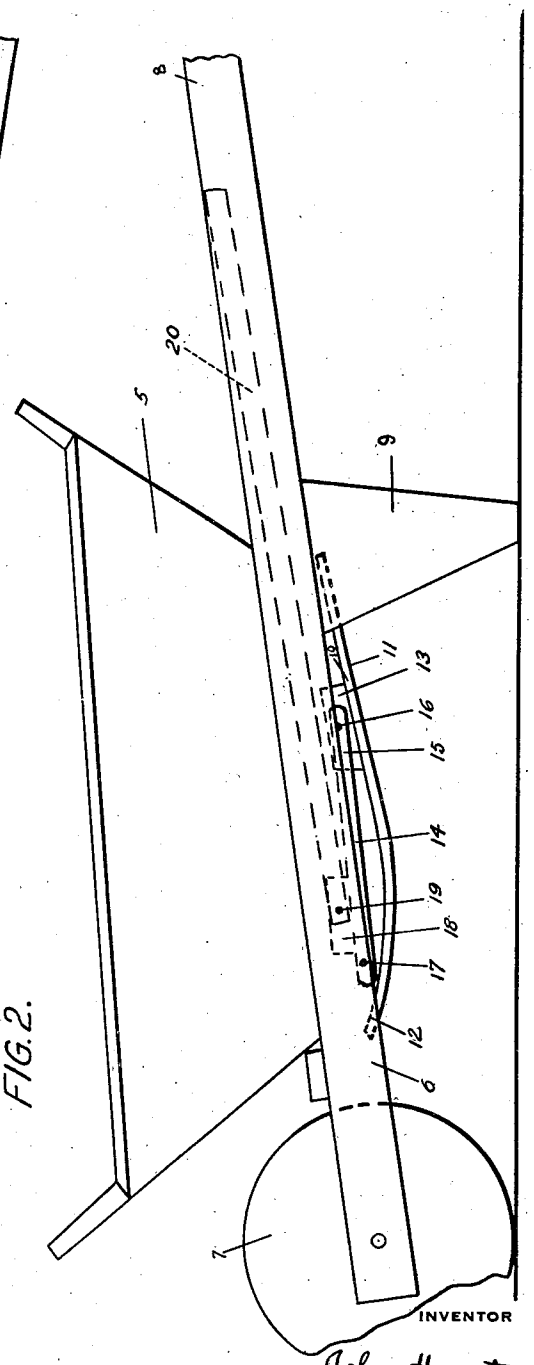


FIG. 2.

INVENTOR

John Hnat

By

Geo. E. Rendell

ATTORNEY

Patented Apr. 9, 1946

2,398,142

UNITED STATES PATENT OFFICE

2,398,142

SKI-EQUIPPED WHEELBARROW

John Hnat, Rome, N. Y.

Application August 11, 1944, Serial No. 549,024

4 Claims. (Cl. 280—9)

My present invention relates to a ski-equipped wheelbarrow, that is, a wheelbarrow having a ski runner which may be disposed underneath the single wheel of the wheelbarrow or may be swung or raised up under the body of the wheelbarrow.

It is believed that the greatest field for this device is as a child's toy, to be run about on its wheel in the way of an ordinary wheelbarrow in the summertime, or in the wintertime, with the ski in operating position to be pushed about in the snow.

The general purpose of this invention is to provide as one desires a wheelbarrow or a ski-equipped wheelbarrow. The purpose of the invention is to provide a device of the character indicated which is economical in construction, easily shifted from one mode of operation to the other and which has its parts strong and simple and so not apt to get out of order and yet allow the whole device to be efficient and satisfactory in either of its capacities. Other purposes and advantages of the device will appear from the specification and the claims herein.

A further purpose is to construct an article of the class described, just as far as possible of wood, that is, with a very minimum of metal parts used for the duration, since during the duration of World War II no war useful metal should be used for toys and amusements.

Fig. 1 is a side view of one of my devices with the ski runner in position to be used.

Fig. 2 is a side view of the device shown in Fig. 1 but with the ski runner raised up under the body of the device so that the single wheel of the wheelbarrow rests upon the ground and the device is adapted for use as a wheelbarrow without any further change or adjustment whatever.

Fig. 3 is a plan view of the device shown in Fig. 1, but with the body or box of the wheelbarrow removed from its supporting frame in order to show the construction and possible operation of the device more plainly.

Fig. 4 is a separate view of the ski runner 10 and its firmly attached block 13, the connecting link 14 and the control and locking rod 20 with the parts as seen from above when they are in the relative position as shown in Fig. 1.

Fig. 5 is a side elevation of the near or left hand side of the rear half of the control and locking rod 20 showing the locking notches 21 and 22.

Referring to the drawings in a more particular description, it will be seen that my device consists of a wheelbarrow having a general open-topped, and box-like body 5 which is supported by and suitably secured to the top of the two longitudinally extending frame members 6. These frame members at their forward ends revolubly mount therebetween a single wheel 7 suitable for a wheelbarrow and as the frame members extend rearwardly, they spread apart to give a suitable spaced support for the body 5 with the frame members 6 extending to the rear of the body 5 a suitable distance and spaced apart further at their rear ends, forming handles 8. The greater portion of these handles is omitted in Figs. 1, 2, and 3, because the rear end and the main positions of these handles project farther to the right than these views admit of showing. The frame members about at the line of the rear line of the body 5, are provided with depending legs 9 for holding the rear end of said body at a satisfactory level, whether the ski runner is being used or not.

The ski runner 10 consists of a flat portion 11 of suitable length and width to support the device upon snow, forward of which flat portion the ski is gently turned up forming an upwardly curved front end 12 as is commonly used upon a ski. About midway its length the ski runner 10 is provided with a block 13 of suitable length and width with this block being strongly secured to the top of the ski runner. To this block is hingedly secured the front end of the connecting link 14; as for example, by the front end of the said link being bifurcated and straddling the rear end of said block 13 and hingedly secured thereto by a pin 16 piercing the two side portions 15 of the bifurcated front end of the said link 14 and the said block 13.

The end of the connecting link 14, that is away from the ski runner 10 is hinged on a transverse horizontal axis to the two side frame members 6 as by this end of the link being located between the said frame members 6 and pierced by a long pivoting bar 17 the opposite ends of which are mounted on the frame members 6. On the bottom and rearward face of link 14 as seen in Fig. 1, there is securely attached to said link a block or boss 18, to which block is hingedly secured on a transverse and horizontal axis the forward end of a control and locking rod 20. As is apparent from Figs. 3 and 4 this control and locking rod is not parallel with the center line of the ski-equipped wheelbarrow but extends from said block rearwardly, closely approaching the inner side of the left hand frame member 6 in order that the rear end of said control and locking rod may be close to said left hand frame member. It is a convenience to have the rear end of said control rod near one frame member and I have shown such rod as located close to

the left hand frame member. As an ordinary operation the user of the device will retain his hold with his right hand on the rear end of the right frame member while he uses the left hand to control and lock the said control and locking rod 20. This accounts for the non-straight or twisted arrangement that seems to be used in the connection of the front end of the control rod to the block 18 on the bottom and rearward side of the connecting link 14 as seen in Figs. 1, 2, and 4.

This combined control and locking rod 20 is supported towards its rear end by resting loosely down upon a cross piece 23 extending between the frame members 6 close to the rear end of the body 5 but below said body. This cross piece serves to space the said side frame members the proper distance apart prior to the body being mounted on said frame members, but the cross piece further serves to provide supporting and locking means to cooperate with locking means upon said control rod. These locking means as shown herein consists of a notch 23' provided in the upper side of said cross piece 23 close to the left hand frame member 6. Upon the control rod 20 the locking means consist of two spaced downwardly facing notches, namely a front notch 21 and a rear notch 22. The arrangement of the parts and these cooperating notches is such that when the ski runner 10 is in forward position underneath the single wheel 7 as shown in Fig. 1, the rear notch 22 on the lower side of the control rod 20 fits into the upwardly facing notch 23^1 and in an obvious manner locks the said control rod and thereby the ski runner from longitudinal motion and particularly from moving rearwardly. On the other hand, when it is desired to move the ski runner to rearward position, it is first unlocked from the locked position just mentioned by the operator lifting the rear end of the locking rod 20 so that the rear locking notch 22 is disengaged from, or raised up out of, the notch 23^1 in the said cross piece 23 whereupon rearward movement imparted to the rear end of said control rod 20 easily moves the said control rod 20 through said cross piece notch and thereby also in obvious manner swings link 14 and the ski runner 10 from their operating position shown in Fig. 1 rearwardly and upwardly to a non-operating and housed position with the ski close below the body of the device and with the link 14 in an almost horizontal position closely below the body and between the two side frame members 6 approximately to the position as shown in Fig. 2. When the parts have been brought to this position the rear end of the control rod 20 is pushed down until the front notch 21 engages with the cross piece notch 23^1 or more properly speaking the control rod is allowed to descend because it has no support for its rear end other than this cross-piece 23 and thus by the engagement of these two notches operates to hold the control rod 20, with these two notches definitely in interengaging position and thereby holding the link 14 in substantially horizontal position and thereby holding the ski runner also upwardly in nearly horizontal position close beneath the said link 14 and relatively closely below the said body of the device substantially as shown in Fig. 2.

It will now be seen that to move the device from this housed position again to operative position of the ski runner, the operation just above described will be reversed, that is, the control and locking rod will be raised enough at its rear end to disengage the front notch 21 on the bottom of the control rod from the cross piece notch 23^1 whereupon the control rod may be pushed forward the necessary distance, the front end of the ski rod being guided, if necessary, by the hands to go forward beneath the wheel 7 until the wheel rests upon the ski block 13 and the control rod is locked in this position by the said control rod being lowered a short distance until its rear notch 22 engages the said cross piece notch whereupon in an obvious manner the ski runner is held in forward and operative position. It will be seen, however, that with the wheel 7 resting more or less upon the ski block 13 the said ski may swing on the connecting pin 16 extending through the said block 13 and the link 14 enough to let the ski adjust itself to general differences in the grade of the land or to local inequalities or obstructions as may be necessary.

It will now be seen that the different parts of this construction are peculiarly well adapted to be made of wood with only a minimum number of parts of metal, such as the pin 16 used to hinge the connecting link 14 to the block of the ski, and the metal pivoting bar 17 extending between the frame members 6 and through the adjacent end of the connecting link 14 and the through bolt 19 used to hinge the forward end of the control rod to the block 18 on the lower side of the connecting link when the ski runner is in operative position. By thus making not only the body and the frame members but the control rod 20 and the connecting link 14 and even the ski runner 10 of wood as well as the cross piece 23 and the depending legs 9 of wood and even the single wheel 7 of wood, a satisfactory and rugged toy is provided for the child without depleting the supply of war useful metal for parts that might ordinarily be made of iron or other similar war useful metal.

What I claim as new and desire to secure by Letters and Patent is:

1. In a ski-equipped wheel-barrow, the combination of a body, a single wheel, a pair of longitudinally extending diverging frame members supporting the body above their middle parts, and mounting said wheel at their front ends, and forming spaced handles behind the body, a ski adapted to be tiltingly positioned below the wheel, or moved rearwardly therefrom and raised up closely below the body, a link pivotally connecting the ski intermediate its ends to the frame members beneath the body, a control rod having its front end pivotally connected to said connecting link and extending from the said connecting link to a point near the rear of the body, means slidingly supporting the rear end of the control rod and means locking said control rod and thereby the ski in either of its extreme positions and legs depending from the frame members near the rear of the body.

2. In a ski-equipped wheel-barrow, the combination of a body, a single wheel, a pair of longitudinally extending diverging frame members supporting the body above their middle parts, and mounting said wheel at their front ends, and forming spaced handles behind the body, a ski adapted to be tiltingly positioned below the wheel, or moved rearwardly therefrom and raised up closely below the body, said ski having securely fastened to its upper side intermediate its ends an upwardly extending block, a link hingedly connecting said ski block to frame members near the front of the body, a control rod having its

front end pivotally connected to said connecting link and extending from the said connecting link to a point near the rear of the body, means slidingly supporting the rear end of the control rod and means locking said control rod and thereby the ski in either of its extreme positions and legs depending from the frame members near the rear of the body.

3. In a ski-equipped wheel-barrow, the combination of a body, a single wheel, a pair of longitudinally extending diverging frame members supporting the body above their middle parts, and mounting said wheel at their front ends, and forming spaced handles behind the body, a ski adapted to be tiltingly positioned below the wheel, or moved rearwardly therefrom and raised up closely below the body, said ski having securely fastened to its upper side intermediate its ends an upwardly extending block forming a line of engagement with the wheel when the ski is being used, a link hingedly connecting said ski block to the frame members near the front of the body, a control rod having its front end pivotally connected to said connecting link and extending from the said connecting link to a point near the rear of the body, means slidingly supporting the rear end of the control rod and means locking said control rod and thereby the ski in either of its extreme positions and legs depending from the frame members near the rear of the body.

4. In a ski-equipped wheel-barrow, the combination of a body, a single wheel, a pair of longitudinally extending diverging frame members supporting the body above their middle parts, and mounting said wheel at their front ends, and forming spaced handles behind the body, a ski adapted to be tiltingly positioned below the wheel, or moved rearwardly therefrom and raised up closely below the body, a link pivotally connecting the ski intermediate its ends to the frame members beneath the body, a downwardly projecting block on what is the rear face of the said link when the ski is being used, a control rod hingedly connected to said block on the link and extending to a point rearward of the body, means slidingly supporting the rear end of the control rod and means locking said control rod and thereby the ski in either of its extreme positions and legs depending from the frame members near the rear of the body.

JOHN HNAT.