SNOW SHOVEL EXPANDER

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ABSTRACT

An extra wide snow shovel blade which may be affixed to existing, narrower conventional snow shovels. This is accomplished very quickly by simply inserting the blade of the conventional snow shovel into the "V" shaped pocket on the back of the extra wide snow shovel blade, and then looping the elastic cord around the back of the shaft of the conventional shovel and hooking it to the eye bolt on the front of the blade.
SNOW SHOVEL EXPANDER
RELATED APPLICATIONS

[0001] The present application is a continuation application of U.S. provisional patent application Ser. No. 61/000,508, filed Oct. 26, 2007, by Thomas Leo Williams, included by reference herein and for which benefit of the priority date is hereby claimed.

FIELD OF THE INVENTION

[0002] The present invention relates to snow shovels and, more particularly, to a wider attachable shovel blade to expand the width of conventional snow shovels.

BACKGROUND OF THE INVENTION

[0003] When removing snow manually from driveways, sidewalks, etc., the amount of effort required varies depending on the consistency and depth of the snow. Lighter snow falls require less effort than heavy snowfalls. Most snow shovels range from 18" to 24" wide; the narrower the shovel, the easier it is to remove heavier amounts of snow. A much wider shovel may be used for lighter snowfalls, with the extra width reducing the number of passes and thus the amount of time to clear an area; unfortunately, this type of shovel is not suited to heavier snowfalls. Ideally, when clearing snow it would be advantageous to have both a narrow snow shovel and an extra wide snow shovel to choose from; the drawback with that solution is the extra expense of purchasing two separate shovels.

[0004] The prior art teaches several other solutions to solve the stated problem. They basically consist of snow shovels with expandable width blades, or a combination of two smaller snow shovels which are removably connected side by side. U.S. Pat. No. 5,228,734 discloses a snow shovel with a blade which is expanded by means of attaching side elements/extensions to the central blade with lock pins. Drawbacks to this device include the time required to change over the blade arrangement, and the use of lock pins which are easily lost and hard to use in cold weather. U.S. Pat. No. 4,991,324 discloses a two-handled snow shovel with an adjustable blade by means of overlapping planar shovel blades which are engaged with lock pins. Drawbacks to this device include the lock pins as described above, and the use of two handles which are not suited to the lifting of snow. U.S. Pat. No. 7,237,814 discloses a device which consists of two separate snow shovels removably connected by means of a male/female connection on the opposing shovels, with the addition of a connecting handlebar between the shovel handles. The primary drawback to this device is the manufacturing cost would be higher than the cost to produce two separate shovels; also the two handles, even when connected by a handlebar, are not suited to the lifting of snow.

[0005] U.S. Pat. No. 4,878,704 discloses a device similar to U.S. Pat. No. 7,237,814, with two separate snow shovels, connected side by side by means of an intermediate blade member and a cross bracing member attached with quick-release connectors, and has the same drawbacks.

[0006] The most common disadvantage of the prior art is, all of the devices are self-contained units which are somewhat complex and have relatively high manufacturing costs vs the cost to purchase two separate snow shovels. It is therefore an object of the present invention to provide a wide blade attachment to expand existing conventional snow shovels. It is another object of the invention to provide such a device without the need for a shovel shaft or handle, so as to keep the cost low.

SUMMARY OF THE INVENTION

[0007] In accordance with the present invention, there is provided an extra wide snow shovel blade which may be affixed to existing, narrower conventional snow shovels. It consists of: an extra wide curved shovel blade, made of formed sheet plastic, molded plastic, formed aluminum or steel, formed fiberglass, or other suitable material; a "V" shaped pocket on the rear of the blade which may be in the form of an attachable bracket, stamped into the blade, or molded into the blade; an elastic cord with a hook on one end, with the loose end of the cord adjustably looped through holes at the top of the blade; and an eye bolt attached to the top of the blade which the hook end of the elastic cord is attached to. To use the device, the conventional snow shovel blade is inserted into the "V" shaped pocket on the back of the extra wide snow shovel blade, and the elastic cord is looped around the back of the handle shaft of the conventional shovel and hooked to the eye bolt on the front of the blade.

[0008] It would be advantageous to provide a wider snow shovel blade which may be used as an add-on device to expand the width of narrower, conventional snow shovels.

[0009] It would also be advantageous to provide such a device which may be connected in a few seconds without tools.

[0010] It would further be advantageous to provide such a device which has a low manufacturing cost.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] A complete understanding of the present invention may be obtained by reference to the accompanying drawings, when considered in conjunction with the subsequent, detailed description, in which:

[0012] FIG. 1 is a front perspective view of a wide blade attachment for conventional snow shovels in accordance with the invention;

[0013] FIG. 2 is a rear perspective view of the wide blade attachment shown in FIG. 1, with an attachable "V" bracket serving as the rear pocket;

[0014] FIG. 3 is a right elevation view of the wide blade attachment shown in FIG. 2;

[0015] FIG. 4 is a front detail view of an of the adjustable elastic cord attachment;

[0016] FIG. 5 is a right elevation view of an of the adjustable elastic cord attachment;

[0017] FIG. 6 is a front elevation view of an of the wide blade attachment affixed to the conventional snow shovel;

[0018] FIG. 7 is a rear elevation view of an of the wide blade attachment shown in FIG. 6;

[0019] FIG. 8 is a front detail view of an of the wide blade attachment with the alternate means of the rear pocket stamped into a metal shovel blade; and

[0020] FIG. 9 is a rear elevation view of the wide blade attachment with the alternate means of the rear pocket molded into a plastic blade.
For purposes of clarity and brevity, like elements and components will bear the same designations and numbering throughout the Figures.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, an extra wide attachable shovel blade 10 is shown. The shovel blade 10 is curved and may be fabricated out of plastic (sheet or molded), metal, fiberglass, or other suitable material. The preferred size would be approximately 48" wide by 10" high, with a thickness of 1/4" to 1/2" depending on the material used. There is a “V” pocket 14 located in the lower center of the rear face of the shovel blade 10, as shown in FIG. 2. This “V” pocket 14 may be a removably attached bracket as shown in FIG. 2 and FIG. 3, a stamped pocket 24 in the center of a metal shovel blade 10 as shown in FIG. 8, or a molded pocket in a molded plastic shovel blade 10 as shown in FIG. 9. The preferred size of the “V” pocket 14 would be approximately 10” wide by 2” high, with the “V” being an acute angle of approximately 20 to 30 degrees. The “V” pocket 14 in the form of a removably attached bracket would be fastened to the shovel blade 10 by means of two flathead countersunk screws 18 installed through holes drilled in the shovel blade 10 and secured with self locking nuts 20, as shown in FIG. 3. The eye bolt 16 is installed through a hole drilled in the upper edge of the shovel blade 10 approximately 10” off center, and is secured with a locking nut, as shown in FIG. 3 and FIG. 1. The cord 12 is elastic (such as bungee material) and has a wire hook on only one end, as shown in FIG. 1. The end with no hook is fed into the front side of a hole drilled in the upper edge of the shovel blade 10 (approximately 10” off center and on the opposite side in relation to the eye bolt 16) and then fed back out through a second hole located approximately 2” outward of the first hole, as shown in FIG. 4, FIG. 1, and FIG. 2. The hole size is only slightly larger than the diameter of the cord 12, so that when a pulling force is applied to the cord 12, the cord 12 is held in place by the friction imposed by the cord 12 weaving in and out of the shovel blade 10.

In operation, the shovel blade 10 is affixed to virtually any existing conventional snow shovel 22 by the following means: the conventional snow shovel 22 is inserted into the “V” pocket 14 at the rear of the shovel blade 10, as shown in FIG. 5, FIG. 6 and FIG. 7. The cord 12 is then stretched up and around the rear of the conventional snow shovel 22 handle shaft and the hook end of the cord 12 is then hooked to the eye bolt 16 on the shovel blade 10, as shown in FIG. 6 and FIG. 7. Since conventional snow shovels vary in the height of their respective shovel blades, it is necessary to be able to adjust the length/tension of the cord 12. The cord 12 tension may be adjusted by means of shortening or lengthening the exposed amount of cord 12 coming out of the front of the shovel blade 10.

Since other modifications and changes varied to fit particular operating requirements and environments will be apparent to those skilled in the art, the invention is not considered limited to the example chosen for purposes of disclosure, and covers all changes and modifications which do not constitute departures from the true spirit and scope of this invention.

Having thus described the invention, what is desired to be protected by Letters Patent is presented in the subsequently appended claims.

What is claimed is:

1. A snow shovel expander for expanding the blade width of conventional snow shovels, comprising:
   means for removing snow;
   means for fastening snow shovel expander to a conventional snow shovel, elastically interwoven to said means for removing snow; and
   means for securing an end of the elastic cord, rigidly connected to said means for removing snow.

2. The snow shovel expander in accordance with claim 1, wherein said means for removing snow comprises an extra wide, curved shovel blade.

3. The snow shovel expander in accordance with claim 1, wherein said means for fastening snow shovel expander to a conventional snow shovel comprises an elastic, adjustable cord.

4. The snow shovel expander in accordance with claim 1, wherein said means for securing an end of the elastic cord comprises a fixed eye bolt.

5. A snow shovel expander for expanding the blade width of conventional snow shovels, comprising:
   an extra wide, curved shovel blade, for removing snow;
   an elastic, adjustable cord, for fastening snow shovel expander to a conventional snow shovel, elastically interwoven to said shovel blade; and
   a fixed eye bolt, for securing an end of the elastic cord, rigidly connected to said shovel blade.

6. The snow shovel expander as recited in claim 5, further comprising:
   an attachable “V” pocket, for supporting the blade of a conventional snow shovel, rigidly connected to said shovel blade.

7. The snow shovel expander as recited in claim 5, further comprising:
   a conventional snow shovel removably affixed to said shovel blade.

8. The snow shovel expander as recited in claim 5, further comprising:
   a conventional snow shovel removably affixed to said shovel blade.

9. The snow shovel expander as recited in claim 5, wherein said shovel blade has characteristics selected from the following group: having a stamped V-pocket, and having a molded V-pocket.

10. The snow shovel expander as recited in claim 6, wherein said shovel blade has characteristics selected from the following group: having a stamped V-pocket, and having a molded V-pocket.

11. The snow shovel expander as recited in claim 7, wherein said shovel blade has characteristics selected from the following group: having a stamped V-pocket, and having a molded V-pocket.

12. The snow shovel expander as recited in claim 8, wherein said shovel blade has characteristics selected from the following group: having a stamped V-pocket, and having a molded V-pocket.

13. A snow shovel expander for expanding the blade width of conventional snow shovels, comprising:
   an extra wide, curved shovel blade, having a stamped V-pocket and a molded V-pocket, for removing snow;
an elastic, adjustable cord, for fastening snow shovel expander to a conventional snow shovel, elastically interwoven to said shovel blade; an attachable “V” pocket, for supporting the blade of a conventional snow shovel, rigidly connected to said shovel blade; a fixed eye bolt, for securing an end of the elastic cord, rigidly connected to said shovel blade; and a conventional snow shovel removably affixed to said shovel blade.