Oct. 4, 1932. H. C. LANGER 1,880,260

SNOW SHOVEL

Filed Nov. 18, 1931

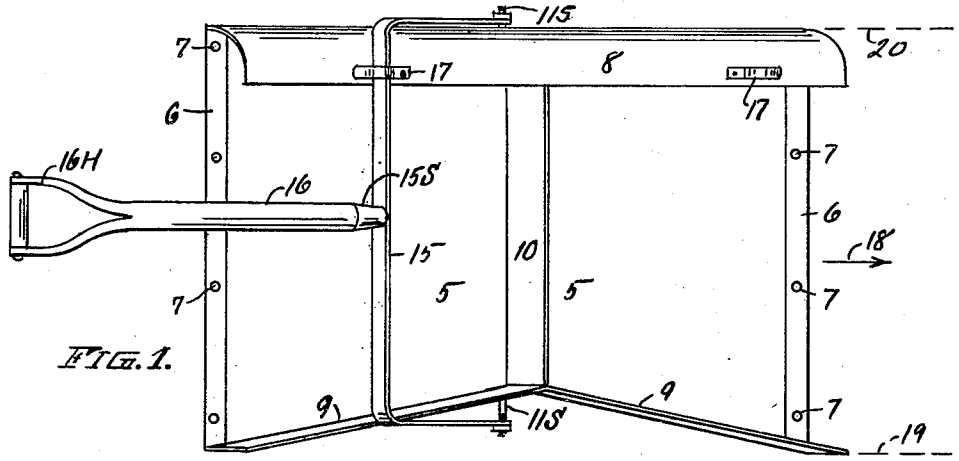


FIG. 1.

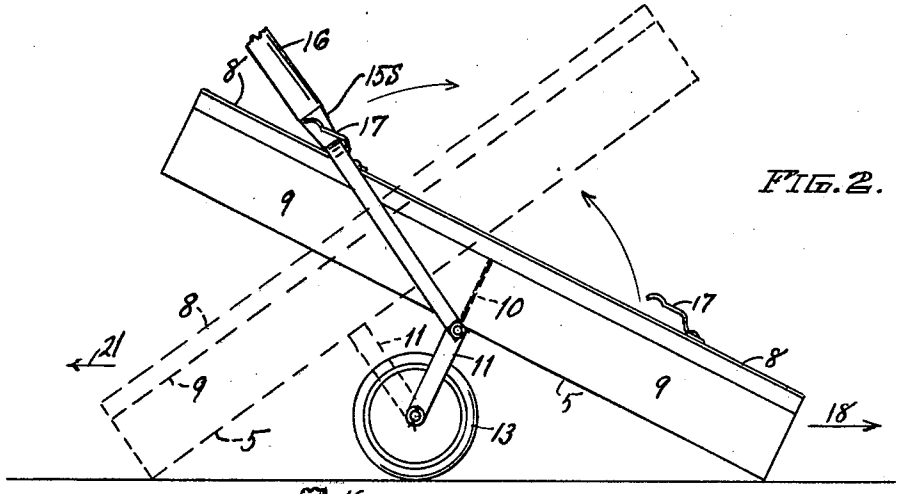


FIG. 2.

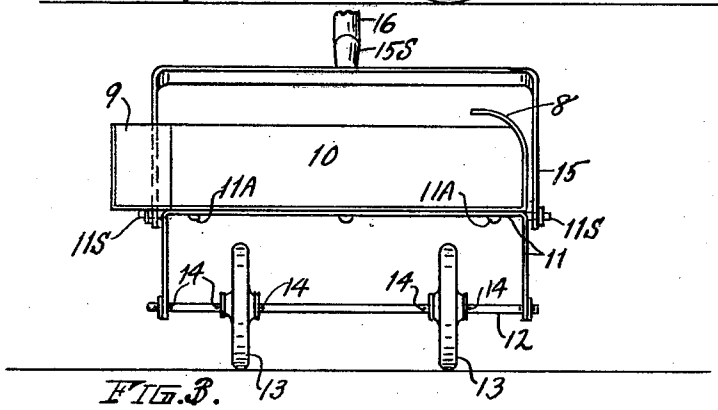


FIG. 3.

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SNOW SHOVEL

Application filed November 18, 1931. Serial No. 575,803.

My invention relates to a device for removing snow from sidewalks, pavement or driveways and is herein designated as a snow-shovel though it does not resemble the well known usual types of hand-operated snow-shovels.

The main object is to provide a simple and highly efficient snow shovel, the use of which eliminates lifting of any quantity of snow, the device being provided with means for clearing off large areas and accumulating the snow on the device then dumping the snow at convenient places.

In the accompanying drawing—

Fig. 1 is a top view of my device in operative position.

Fig. 2 is a side elevation of Fig. 1 and Fig. 3 is a front elevation of the device with its scoop member held in horizontal plane.

Referring to the drawing by reference numerals, my snow shovel comprises a sheet metal scoop member with a flat base 5 of elongated approximately quadrangular shape, the transverse end edges thereof comprising the scraper edges corresponding to the front edge of an ordinary shovel. Said transverse edges are preferably each provided with a removable blade 6, secured as with screws 7.

One side of the base is provided with an integral upward and inwardly curved guard 8. The opposite edge is preferably cut in two angular lines from the outer corners toward the center and these edge parts provided with integral continuous upright flange 9. Where these angular flanges meet the base is of course relatively narrow, at the center, and a transverse flange 10 removably fixed across said narrow part to and under the guard 8.

To the under side of the said narrow part of the base is removably fixed at 11A a light metal bar frame 11 of inverted U-shape, and in the lower ends of the arms thereof is removably fixed a wheel shaft 12. 13 are a pair of ground wheels rotatable on shaft 12 and retained thereon by any suitable means such as cotter pins 14.

The frame 11 is further provided with two outwardly extending threaded stub shafts 11S projecting outwardly from the base member. 15 is a U-shaped handle-bail, the free ends of which have each an aperture to journal on a stub shaft 11S, and the cross bar of said bail provided at its central part with a handle socket 15S to receive a handle 16, the opposite end of which comprises a D-type handle 16H as clearly shown in Fig. 1. The handle and bail comprise an assembled rigid unit, the bail being of such size as to freely swing on its journals forward or rearward and close to guard 8 in either position. 17 are a pair of pivoted spring metal pawls on guard 8 and so located as to engage the bail one at a time and hold the latter rigidly in acute angular position relative to the scoop member.

In the use of the device and referring particularly to claim 1, an operator merely pushes on handle 16 in direction of arrow 18, the transverse scraper 6 at the right (in Fig. 1) contacting with the walk and with the front right hand corner movable along a line designated 19 which may represent the front wall of a building adjoining the sidewalk being cleared of snow. Obviously the device clears a path as between the dotted lines 19–20 and snow accumulates on the lower half of the device up to partition 10.

When filled the scoop is tilted to horizontal plane (Fig. 3) and the device wheeled to a dumping place, dumping of the device being accomplished by merely letting the device down again and tilting it up with the forward edge or scraper 6 acting as a fulcrum and the snow slides out of the tipped up scoop. The device is readily reversed by simply releasing yoke 15 from contact with pawl 17 and swinging handle 16 forward to contact with the opposite pawl 17 (as the one to the right in Fig. 1). Then the device is tilted in opposite direction so that the opposite scraper 16 contacts with the walk, the latter position of the scoop being shown in dotted lines in Fig. 2 and direction of action indicated by arrow 21. It will be readily understood that both container parts of the scoop may be filled before emptying if so desired.

The construction and use of my device have now been fully described. It is my in-

tention to construct the device in such manner that all parts are separable and removable or easily assembled. For example, flanges 9, partition 10, guard 8, scrapers 6, etc., are all assembled in their respective places by screws or other suitable means, for replacement. Obviously other parts such as yoke 15, shaft 12 and handle 16 are likewise easily removable or replaced.

In the use of my device no snow is lifted by the operator, it merely is accumulated on the scoop until the latter is filled, then dumped as described and the emptied device ready for another filling. With the device made in ample size with scrapers 6 about 26 inches wide and the scoop member about 42 inches long, it has been found that a sidewalk of considerable length and width is rapidly and efficiently cleared of snow in a short time.

I claim:

1. A snow-clearing device comprising an elongated wheel supported scoop member, a transverse scraper blade at each end of said scoop, a wheel truck fixed under the central part of the scoop and the wheels thereof positioned to permit the scoop to be moved longitudinally with either of said scraper blades in contact with a surface to be cleared of snow, side flanges fixed on said scoop member, and a central transverse partition connecting said side flanges.

2. The structure specified in claim 1, and said wheel truck comprising an inverted U-shaped frame, a wheel axle removably retained in the lower part of said truck-frame, stub shafts formed integral of said U-frame and projecting outward from its upper part outwardly of the sides of said scoop, a handle bail fulcrumed on said stub shafts to swing freely over the scoop, a handle removably fixed to said bail to extend normally in a direction longitudinally of the scoop, and means on the scoop to engage said bail and hold it rigidly to the scoop in either of two selective positions.

3. The structure specified in claim 1, and said wheel truck comprising an inverted U-shaped frame, a wheel axle removably retained in the lower part of said truck-frame, stub shafts formed integral of said U-frame and projecting outward from its upper part outwardly of the sides of said scoop, a handle bail fulcrumed on said stub shafts to swing freely over the scoop, a handle removably fixed to said bail to extend normally in a direction longitudinally of the scoop, and means on the scoop to engage said bail and hold it rigidly to the scoop in either of two selective positions, and comprising a pair of spring metal pawls located on the side guard of the scoop, each pawl pivoted and formed with an offset arm adjacent said pivot, said offset part adapted to frictionally engage the yoke.

4. A snow-shovel comprising an elongated scoop member with front and rear transverse scraper members, a wheel truck supporting the central part of the scoop with either of said scrapers in ground contact and the scoop in corresponding angular plane, a handle arranged longitudinally of and over the scoop, a yoke member for said handle, straddling the scoop and pivotally engaged at the central part thereof, said scoop member comprising an elongated flat base, an upwardly and inwardly arched guard plate at one side, a central transverse partition extending from said arched guard to the opposite side of the base, and vertical flange means at the side of said base opposite the arched guard.

5. The structure specified in claim 4, in which said base is narrower at its center, transversely, than at the respective ends, and its edge at that side together with said vertical flanges extending in respective angular planes to the respective front and rear corners of the scoop.

6. A reversible wheel supported snow-shovel comprising an elongated scoop member with opposite side guards and a central transverse partition dividing the scoop into a front and rear compartment each with an exterior transverse ground contacting edge and a single handle device pivotally mounted central of the scoop and arranged to be held in either of two positions in an inclined plane and simultaneously hold the scoop with one of its transverse outer edges in contact with the ground while moving the device forward.

In testimony whereof I affix my signature.

HENRY C. LANGER.