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SHOVEL

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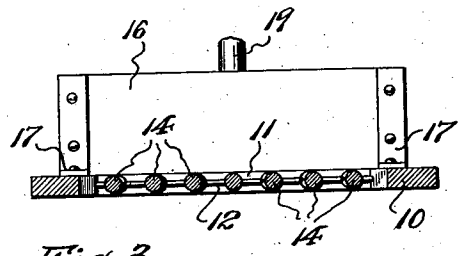


Fig. 3

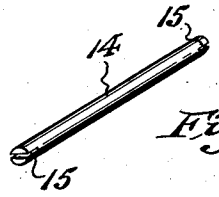


Fig. 4

Fig. 1

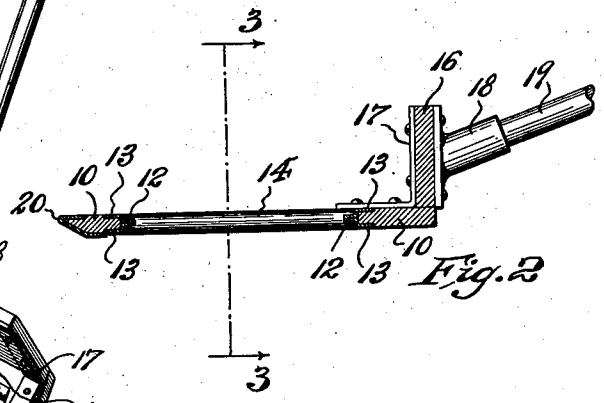


Fig. 2

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SHOVEL

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3 Claims. (Cl. 294—54)

This invention relates, generally, to improvements in shovels; and the invention has reference, more particularly, to a novel construction of shovel especially adapted for use as a snow shovel.

The invention has for an object to provide a novel construction of shovel especially adapted for removing snow; said shovel being of light weight and easy to use, and having a body or blade section of such novel form that, in use, tendency of the snow taken up thereby to stick or cling thereto, and thus impede efficient use of the shovel, is avoided.

The invention has for a further object to provide a novel construction of snow shovel, the body or blade section of which is provided with a central opening of a size comprehending the major portion of the area of said body or blade section, said opening being spanned by a plurality of spaced rods or rungs, whereby the face of said body or blade section will afford adequate support for lifting a snow mass, but a minimum of surface in contact with the lifted snow mass, so that tendency of the snow to stick or cling to the face of said body or blade section is prevented.

Another object of the invention is to provide means whereby the spaced rods or rungs of the shovel body or blade section may be detachably mounted across the opening thereof, to permit increase or decrease of the number thereof and adjustment or alteration of the spacing thereof as conditions may make expedient.

Other objects of this invention, not at this time more particularly enumerated, will be understood from the following detailed description of the same.

An illustrative embodiment of the invention is shown in the accompanying drawing, in which:

Fig. 1 is a perspective view of a shovel made according to the invention; Fig. 2 is a longitudinal sectional view of the shovel, drawn on a somewhat enlarged scale, the handle shaft being broken away in part; Fig. 3 is a transverse sectional view of the same, taken on line 3—3 in Fig. 2; and Fig. 4 is a perspective view of one of the rods or rungs with which the body or blade section of the shovel is provided.

Similar characters of reference are employed in the hereinabove described views, to indicate corresponding parts.

The novel snow shovel according to this invention comprises a body or blade section 10 of suitable length, width and peripheral conformation, the central portion of which, constituting a major part of its total surface area, is cut away to provide an interior opening 11. The inner and outer transverse margins of said interior opening 11 are each provided with tongue beads or ribs 12 extending therealong between the longitudinal side margins of said interior opening. Said tongue beads or ribs 12 are of less thickness than the thickness of said body or blade section 10. Said tongue beads or ribs 12 may be shaped from and form an integral part of the material of which the body or blade section is made, or (as shown) may be formed of sheet metal, folded upon itself to provide the same, and so as to further provide spaced angular anchoring wings or flanges 13 adapted to straddle and embrace the transverse marginal portions of the body or blade section opening, and being thereupon affixed to said marginal portions by suitable fastening means.

Said interior opening 11 of the body or blade section 10 is spanned by a plurality of longitudinally extending, laterally spaced apart rods or rungs 14. Said rods or rungs are preferably of circular cross sectional shape, and preferably of a diameter substantially equivalent to the thickness of the body or blade section 10. Said rods or rungs 14 are provided at their respective ends with transverse indenting notches 15 (see Fig. 4). To mount said rods or rungs 14 so that they span the interior opening 11 of the body or blade section, the same are disposed somewhat obliquely within said interior opening, so that their notches 15 may be brought into alignment respectively with the opposed tongue beads or ribs 12, whereupon, by swinging the rods or rungs into substantially longitudinally extending positions, the notches 15 will engage over and embrace the tongue beads or ribs 12, so as to be firmly and strongly bound thereto in operative assembled relation to said body or blade section. A desired number of said rods or rungs 12 are thus assembled with the body or blade section in laterally spaced apart relation, and in longitudinally spanning relation to said body or blade section opening.

Connected with the rearward end of said body or blade section 10, and preferably so as to be coextensive therewith, is an upstanding heel member 16. Said heel member 16 is unitary with the body or blade section 10, and may be integral therewith or may be secured in assembled relation thereto in any suitable manner.

Said body or blade section 10 and heel member 16 of the shovel may be made of wood, sheet metal or other suitable material, but is preferably made of wood, and desirably of plywood,

since the latter material is of light weight and yet exceedingly strong and durable. When the body or blade section 10 and heel member 16 are made of wood and suitably secured together, they may be further secured and reenforced by the application thereto of angle irons 17 suitably affixed thereto.

Affixed to the back of the heel member 16 is a handle shaft attachment socket 18, to which is affixed and from which extends a suitable handle shaft 19 by which the shovel may be manipulated.

When the body or blade section 10 is made of wood its free end or toe portion may be provided a wear resisting sheet metal binding or armor strip 20 suitably secured thereto.

When the snow shovel of this invention is used, the body or blade section 10 is inserted beneath a snow mass desired to be moved, and said mass is lifted away by the body or blade section in the usual manner, and then, by swinging the shovel, tossed aside. Owing to the interrupted or discontinuous surface provided by the body or blade section opening 11 as spanned by the rods or rungs 14, the lifted snow mass, even when the snow is quite wet, will not tend to stick or cling to the body or blade section, since there is but a minimum of actual surface contact of the latter with the snow, and consequently, when the shovel is swung to toss off the lifted snow, the weight and inertia of the snow mass easily overcomes any tendency of the snow to adhere to such limited surface as actually engages the same, with the result that the snow mass quickly and easily disengages the face of the body or blade section, so as to readily fly off therefrom with substantially no tendency to stick or cling thereto.

Notwithstanding the interrupted or discontinuous surface provided by the body or blade section 10 as spanned by the rods or rungs 14, said surface will adequately support the snow taken up by said body or blade section, when separated from the lying snow operated upon. Since, however, the rods or rungs 14 are detachably mounted and adjustably movable as to their assembled relation to the body or blade section 10, it will be obvious that the number of rods or rungs 14 may be easily and quickly increased or decreased at will, with consequent adjustment of the relative spacing thereof, so that the snow lifting and supporting effect of the body or blade section may be easily and quickly altered as may be desirable according to the condition or character of the snow to be operated upon. For example, if a very light and dry snow is to be cleared away, the number of rods or rungs 14 may be increased to obtain closer spacing thereof; on the other hand, if the snow is heavy and wet, the number or rods or rungs 14 may be decreased to permit wider spacing thereof, and diminished surface area in actual contact with the lifted snow.

From the above description of my invention it will be understood that the same provides a very efficient snow handling implement, which is not only of light weight and easy to manipulate in use, while possessing the advantage of eliminating tendency of snow to stick or cling thereto, but, additionally, the construction is of simple character, and one capable of being produced and distributed at comparatively low cost.

Having now described my invention, I claim:

1. A shovel of the kind described comprising a blade section having an opening of substantial area in the plane thereof, projecting tongue ribs extending into said opening from opposed margins thereof, and a plurality of rungs, said rungs having notched ends to respectively embrace said tongue ribs whereby to support the rungs in spaced apart spanning relation to and across said opening.

2. A shovel of the kind described comprising a blade section and a heel member extending from the rearward end of said blade section, a handle shaft extending rearwardly from said heel member, said blade section having an opening of substantial area in the plane thereof, projecting tongue ribs extending into said opening from opposed margins thereof, and a plurality of rungs, said rungs having notched ends to respectively embrace said tongue ribs whereby to support the rungs in spaced apart spanning relation to and across said opening.

3. A shovel of the kind described comprising a blade section and a heel member extending from the rearward end of said blade section, a handle shaft extending rearwardly from said heel member, said blade section having an opening of substantial area in the plane thereof, projecting tongue ribs extending into said opening from opposed transverse margins thereof, and a plurality of rungs, said rungs having notched ends to respectively frictionally embrace said tongue ribs whereby to detachably and adjustably support said rungs in spaced apart spanning relation to and across said opening.

DAVID L. CROSS.