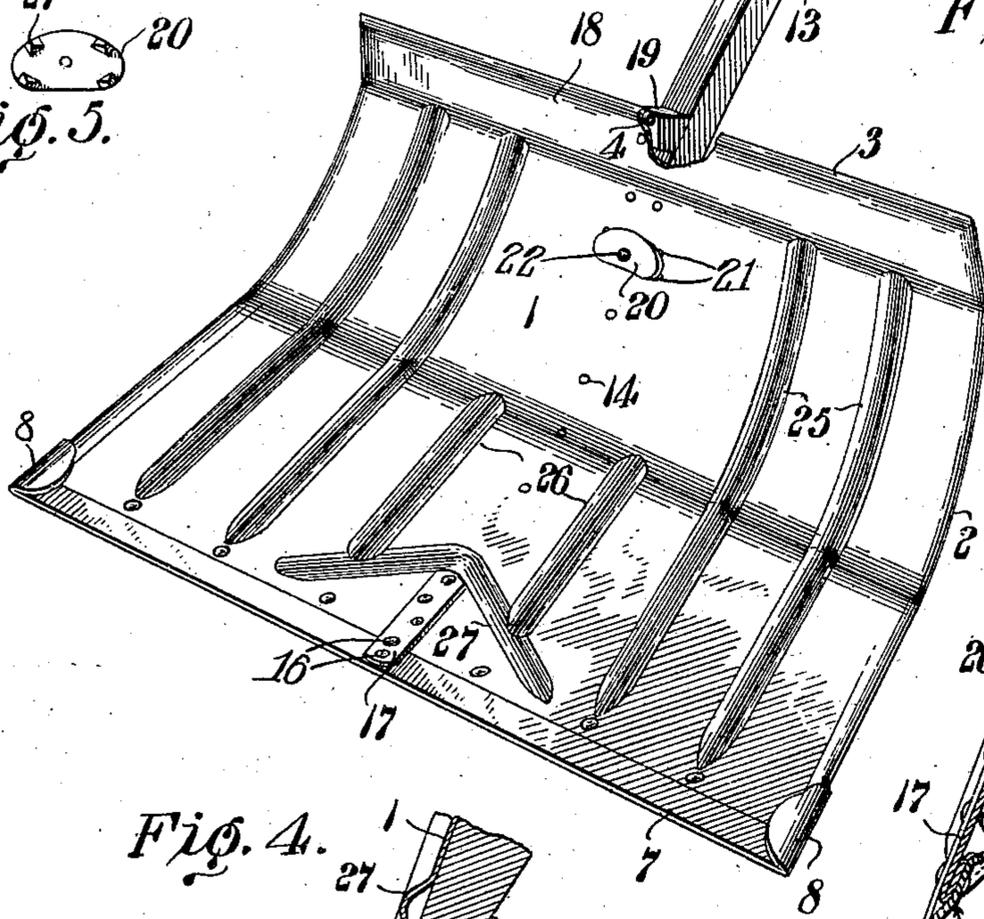
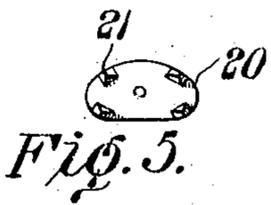
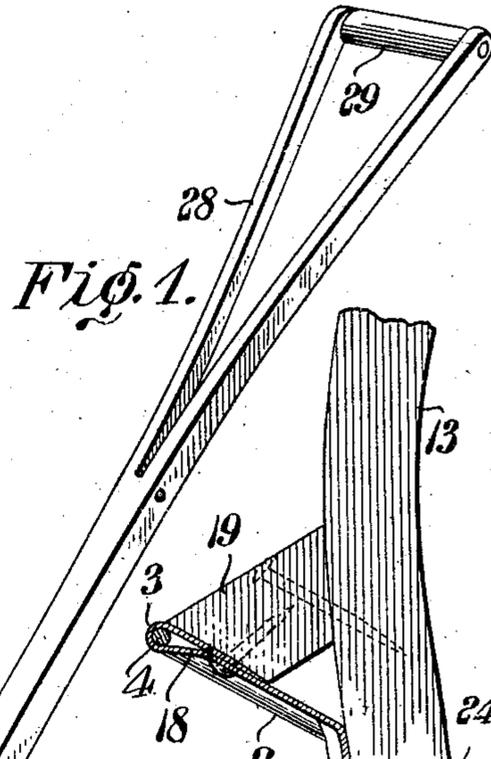
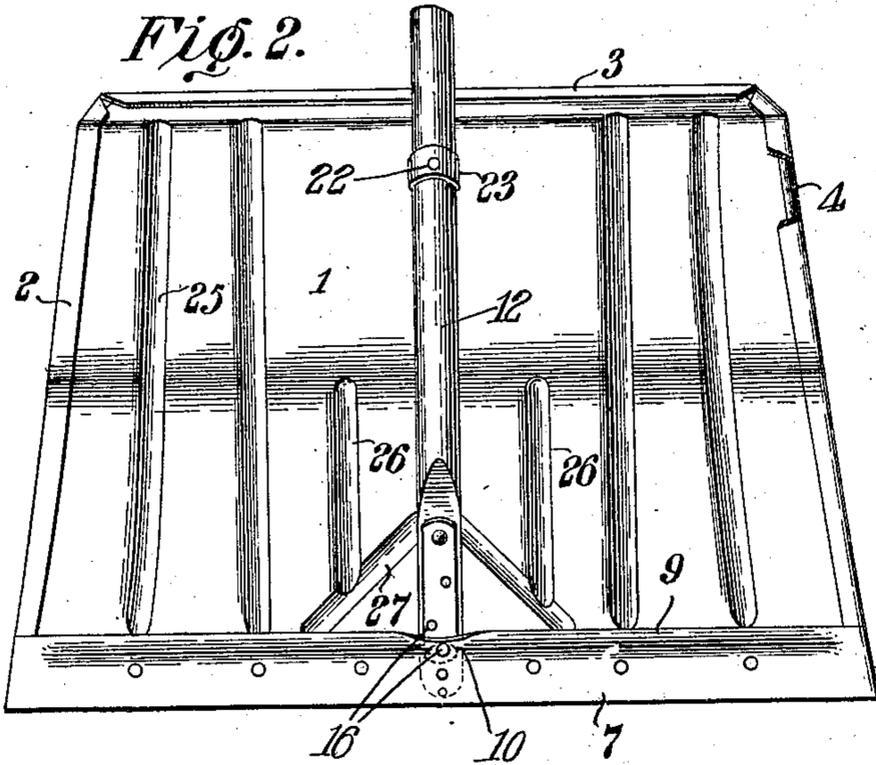


No. 860,086.

PATENTED JULY 16, 1907.

J. GIFFORD.  
SNOW SHOVEL.

APPLICATION FILED FEB. 23, 1907.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JOHN GIFFORD, OF WATERTOWN, NEW YORK.

## SNOW-SHOVEL.

No. 860,086.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed February 23, 1907. Serial No. 358,907.

*To all whom it may concern:*

Be it known that I, JOHN GIFFORD, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of New York; have invented a new and useful Snow-Shovel, of which the following is a specification.

This invention relates to snow shovels and its object is to simplify and improve upon devices of this character heretofore constructed.

The principal object of the invention is to provide a blade formed of inexpensive sheet metal which is reinforced in a novel and efficient manner.

A still further object is to provide improved means for attaching the blade to a handle.

Another object is to provide a socket connection between the handle and blade, which connection also constitutes a rocker for use as a fulcrum when it is desired to lift the edge of the blade from the ground.

A still further object is to provide a blade the main portion of which is formed of an inferior grade of metal, whereas the working edge thereof is made up of a heavy and more lasting material.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a perspective view of the shovel constructed in accordance with the present invention, a portion of the blade being broken away to show the back portions thereof; Fig. 2 is a rear elevation of the blade and that portion of the handle adjacent thereto, one edge of the blade being broken away to show its reinforces; Fig. 3 is a longitudinal section through the blade at one side of the handle; Fig. 4 is a section through the lower end of the handle and the adjoining portion of the blade; and Fig. 5 is a detail view of one of the securing devices for fastening the handle and blade together.

Referring to the figures by characters of reference, 1 is a blade preferably formed of thin galvanized sheet metal, the side edges 2 and rear edge 3 of which are folded inward upon the bottom face thereof and over a stiff reinforcing wire 4 which extends along the rear and side edge portions of the blade and serves to prevent the same from buckling. The front edge portion of the blade is bent under and flattened against the lower face thereof, as shown at 5.

Riveted to this folded edge 5 of the blade 1 is the down-struck edge portion 6 of a lip 7 formed of a heavy strip of metal extending throughout the width of the shovel and provided at its ends with inturned ears 8 constituting saddles which embrace the front corner portions of the blade 1 and serve to reinforce them. The innermost edge of the strip 7 is crimped longitudinally, as

shown at 9, so as to reinforce said strip in the direction of its length and prevent it from bending. At an intermediate point this crimped portion is flattened to form a socket 10 into which projects the pointed end 11 of the bowed portion 12 of a handle 13. This bowed portion conforms to the contour of the bottom face of the blade 1 and said blade is secured thereto by a series of nails, as indicated at 14 or in any other preferred manner.

A connecting strap 15 is secured to the lower face of the end portion of the handle and projects into the socket 10 where it is secured by rivets 16 which extend through the socket 10 and strap 15 and also through the edge portion 5 of blade 1 and through a reinforcing strip 17. This reinforcing strip is disposed along the longitudinal center of the blade 1 adjacent the front edge thereof and is riveted or otherwise fastened to the exposed upper face of lip 7 and to the adjoining portion of the blade 1. A stop flange 18 is formed along the upper portion of the blade by bending said portion outward along a line extending from side to side thereof, and this stop flange is rigidly braced by a block 19 interposed between it and the handle 13. This block is fastened to the handle and the flange in any preferred manner as by means of nails driven thereto. That portion of the blade 1 adjacent the flange 18 is preferably fastened to the bowed portion 12 of the handle by means of a plate 20 having spurs 21 adapted to be forced into the blade and to be held in engagement therewith by a rivet 22. This rivet extends through the handle and also through a saddle 23 which straddles the handle and is also formed with spurs 24 similar to the spurs 21. As this plate 20 covers a considerable area upon the blade 1 it prevents the blade, which, as before stated, is made of comparatively thin metal, from tearing away from the handle as would be the case if nails only were employed for fastening it thereto.

In order that the thin metal blade 1 may be reinforced to prevent buckling thereof, said reinforcement is accomplished by striking beads 25 upward therefrom. As shown in the drawings preferably two of these beads are disposed longitudinally at each side of the center of the blade and extend from the lip 7 to the flange 18. Two shorter beads 26 are also preferably disposed between the long beads and arranged adjacent the lower or front ends of these short beads is a V-shaped bead 27. The reinforcing strip 17 extends to the apex of this bead 27.

By constructing the blade in the manner described it is possible to form the main portion thereof of a comparatively thin sheet of metal and the same will be reinforced both longitudinally and transversely without the necessity of employing separate wooden strips and similar devices such as have heretofore been used. Moreover, the lip 7 by reason of its peculiar construc-

tion and arrangement receives most of the wear to which the shovel is subjected and thus renders it possible to construct the body of the blade out of the thin metal mentioned. By providing saddles 8 at the ends 5 of the lip 7 it becomes possible to use the corners of the shovel for striking ice and hard packed snow for the purpose of breaking it and as the lip and the saddles formed therewith are of strong, durable metal the shovel will not be injured when the device is used in 10 this manner. By providing the socket 10 the same can be used as a fulcrum upon which the front portion of the blade can be swung upward as when it is desired to insert the lip 7 under ice or hard packed snow and to then force the same upward so as to loosen or break 15 it. The bowed portion 12 of the handle can also be used in a similar manner if the movement produced by rocking the blade upon the socket 10 is insufficient. It is of course to be understood that the handle 13 20 Fig. 1 the same may be split as indicated at 28 and

provided with a grip 29 which is secured within the split portion.

What is claimed is:

In a shovel a blade consisting of a sheet of metal having reinforced side and rear edges, a lip of heavier material 25 than the blade and secured along one edge thereof, a reinforcing strip secured longitudinally within the center of the blade and upon the lip, a handle secured longitudinally upon one face of the blade, obliquely disposed reinforcing ribs struck from the blade and extending over 30 the inner end of the reinforcing strip toward the lip, said ribs constituting means for reinforcing the blade transversely at and adjacent its points of contact with the handle, and parallel reinforcing ribs extending from the diagonal ribs and longitudinally of the blade. 35

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN GIFFORD.

Witnesses:

ELMER V. SANTEE,  
CHESTER R. MORRISON.