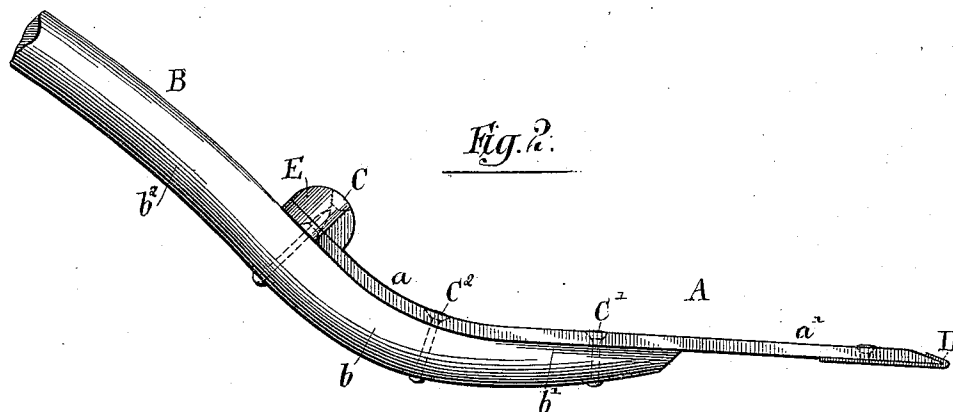
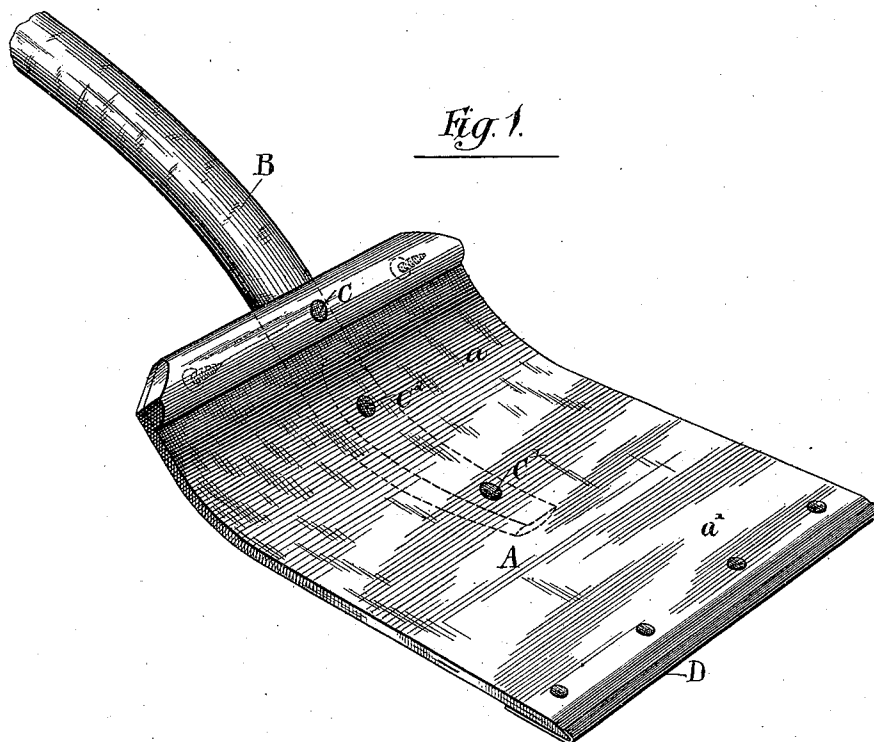


(No Model.)

E. H. HUDSON.
SHOVEL.

No. 355,648.

Patented Jan. 4, 1887.



Witnesses:-

Louis W. Whitehead.
Chas. E. Fisher.

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UNITED STATES PATENT OFFICE.

ELISHA H. HUDSON, OF POTTERVILLE, MICHIGAN.

SHOVEL.

SPECIFICATION forming part of Letters Patent No. 355,648, dated January 4, 1887.

Application filed June 15, 1886. Serial No. 205,197. (No model.)

To all whom it may concern:

Be it known that I, ELISHA H. HUDSON, of Potterville, in the county of Eaton and State of Michigan, have invented certain new and useful Improvements in Shovels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of wooden shovels, more particularly adapted for shoveling snow, which comprise a broad, curved, or bent wooden blade and a wooden handle attached thereto. In the manufacture of these shovels prior to my invention a bent or curved wooden blade has been secured to a wooden handle fitted to and against the front side or concave face of the blade, the two being secured together by bolts or rivets, and the blade being usually strengthened by a metal tip or binding along its lower end edge, and also by a wooden cross-piece secured to the back surface of the blade adjacent to the top edge thereof. The shovel thus constructed has presented some disadvantages, which it is the purpose of my invention to remedy, the most noticeable defects having been the tendency of a weight upon the blade in the use of the shovel to force the blade down and away from the lower end of the handle, thereby tending to draw the blade away from the handle and to put a strain upon the rivets connecting the parts, calculated either to draw the heads of the rivets through or to split the wood of both the blade and the handle. In the employment of a considerable number of rivets to unite the handle and blade the durability of the shovel will not be materially increased, for the reason that the parts will be weakened in proportion to the number of the rivets, and both the blade and the handle thereby rendered more liable to become split.

Another objection to shovels constructed as described is that the cross-piece attached to the back surface of the blade adjacent to the upper edge thereof is, during the use of the shovel, liable to come in contact with hard objects or obstructions, and hence, unless secured by a large number of rivets, which weaken both members in proportion to their

number, will become easily loosened or detached.

The wooden snow shovel herein shown and constructed in accordance with my invention has the wooden handle applied to the rear side or convex surface of the wooden blade, whereby when the shovel is in use the blade is supported upon, or a downward pressure on the blade is resisted by, the lower end of the handle. In such construction, therefore, comparatively few rivets are required for uniting the handle and blade, since the weight of a load upon the handle tends to hold the lower part or body of the blade more closely against the handle.

The said shovel also has a wooden cross-piece attached to the front side of the blade at a point adjacent to the upper end edge thereof, said cross-piece being preferably attached by a rivet to the handle, whereby the upper portion of the blade is held rigid and the shovel is given a shape more convenient for use, inasmuch as the said cross-piece forms a forward extension of or projection or flange upon the top edge of the blade calculated to prevent snow or other material which is being moved by the shovel from slipping over the upper edge of the blade when the latter is raised.

In carrying out my invention the wooden blade will usually be bent so as to curve forward at its upper end portion, as heretofore, and the wooden handle will be bent at its lower end to conform to the curvature of the blade, and will preferably be also bent so as to curve in a reverse direction at a point above its connection with the blade, thereby bringing the handle into position for the more convenient use of the shovel.

A form and construction of wooden snow shovel embodying these desirable features of strength, durability, and general utility is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, and Fig. 2 a side elevation, of a shovel constructed in accordance with my invention, showing only the blade and the part of the handle adjacent thereto.

A represents a broad curved wooden shovel-blade, and B a wooden handle, which is secured to the rear side or convex surface of the

said blade. The blade is bent forward at its upper end portion, so as to form a curved portion, *a*, extending from its top end to a point near its middle, where it joins the straight lower portion, *a'*. The lower end portion, *b*, of the wooden handle is bent to conform to the curvature of the part *a* of the blade, and preferably extends somewhat below the said curved portion *a* thereof, the adaptation of the handle to the straight portion just below the curve being provided by tapering or flattening the end of the handle on its side next to the blade, as shown at *b'*.

The blade and handle are secured together by bolts or long rivets, of which three, *C*, *C'*, and *C''*, are herein shown, but of which any desired number may be used, depending upon the size of the shovel and the length of the part *b* of the handle which overlaps the blade.

The blade is strengthened at its lower end by a metal tip or binding, *D*, and at its top end is braced and strengthened by a wooden cross piece or bar, *E*, which is fitted against the front side of the blade adjacent to the top edge thereof.

The piece or bar *E* is secured at its middle to the handle by a single bolt or long rivet, *C*, passing through the bar, the blade, and the handle, and may be attached to the blade by a suitable number of rivets or screws, as shown. This bar *E*, being at the front or upper side of the blade, serves as a flange or guard to increase the capacity of the shovel and prevent the snow or other material being handled from slipping back over the top edge of the blade in the use of the shovel, and is made of one straight piece—a feature which would not be practicable were the handle attached to the front side of the blade. The bolt *C* passes entirely through the bar at the middle of the latter, which therefore serves as a bearing for the bolt at one side of the blade, while the handle serves as a bearing therefor at the opposite side of the blade, and which is clamped between said two members. The handle is at a point just above its connection with the blade bent in a direction reverse to the bend *b* at its lower end, as shown at *b''*, said bend serving to give a better form to the handle, or, in other words, to bring its outer end in position for the more convenient use of the shovel, and to give a better “balance” to the latter.

By the construction above described it is obvious that the upper or top edge of the blade will be securely and firmly held in position with reference to the handle by the cross-piece *E*, which is secured to the edge of

the blade, and also to the handle, and that the downward or backward pressure upon the body or lower edge of the blade occurring in the use of the shovel will be exerted against the lower end of the handle, and will therefore have no tendency to break or tear out of the wood the rivets passing through the blade and handle.

Another and important advantage gained by the use of a bent handle secured to the bent wooden blade, as described, is that both the handle and blade are thereby held firmly in their bent positions and prevented from straightening out by becoming wet or by handling in use.

Metal tips *D*, similar to those herein shown as attached at the edge of the wooden blade, have been heretofore secured to the wood by nails inserted through the strip and the wood, with their heads against the strip, and with their points turned over or clinched against the wood. This means of fastening the strip is objectionable both in point of appearance and strength, and as an improved construction in the shovel in this particular I attach the strip by flat-headed rivets, which are placed with their heads at the upper surface of the blade in contact with the wood, and are riveted at their opposite ends against the metal strip, as shown.

I claim as my invention—

1. A wooden snow shovel consisting of a bent blade, *A*, a wooden handle, *B*, curved to conform to and secured against the rear surface of the wooden blade, a cross-piece, *E*, secured to the front side of the blade adjacent to the top edge thereof, and a bolt or rivet, *C*, passing through the cross-piece *E*, the blade, and the handle, substantially as described.

2. As an improved article of manufacture, the herein-described wooden snow-shovel, consisting of a bent wooden blade, *A*, a wooden handle, *B*, bent to form reverse curves *b* and *b''* at its lower end portion, the curved part *b* being secured to the rear or convex side of the blade, a cross piece, *E*, secured to the front side of the blade adjacent to the top edge thereof, and a rivet, *C*, passing through the cross-piece, the blade, and the handle, substantially as shown and set forth.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

ELISHA H. HUDSON.

Witnesses:

GEO. F. PERRY,
SARAH A. MARTIN.