

(No Model.)

J. KAERCHER.
SNOW SHOVEL.

No. 502,724.

Patented Aug. 8, 1893.

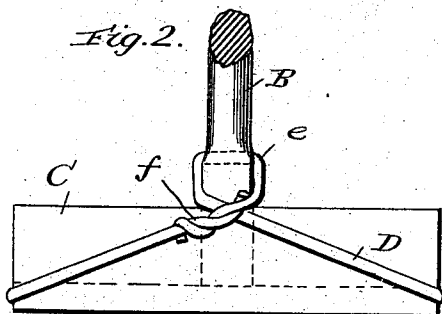
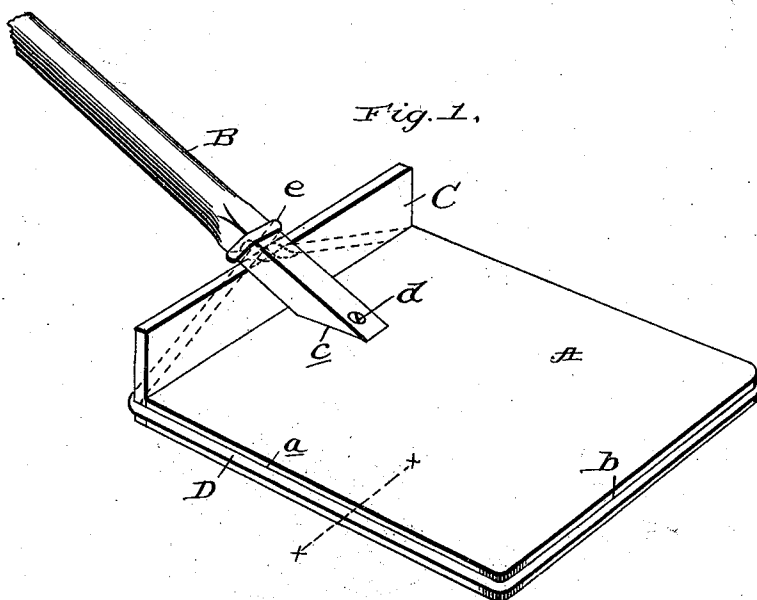


Fig. 3.



Fig. 4.



Witnesses:

C. F. Paeder
W. F. Matthews.

Inventor
John Kaercher.
By James Sheehy
Attorney

UNITED STATES PATENT OFFICE.

JOHN KAERCHER, OF BARABOO, WISCONSIN.

SNOW-SHOVEL.

SPECIFICATION forming part of Letters Patent No. 502,724, dated August 8, 1893.

Application filed March 30, 1893. Serial No. 468,301. (No model.)

To all whom it may concern:

Be it known that I, JOHN KAERCHER, a citizen of the United States, residing at Baraboo, in the county of Sauk and State of Wisconsin, have invented certain new and useful Improvements in Snow and other Shovels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in snow and other shovels, in which a wooden blade or the like is used, and it has for its prime object to strengthen such blades and render the shovel more effective for the purposes desired, by preventing the blade from splitting; and to adapt such blade for cutting snow and ice by the use of the hard cutting edge which it presents.

A further object of the invention is to construct a shovel at a minimum expense which will readily permit of the handle being removed and replaced and consequently occupy but little space in transportation and storage, and may be put together and taken apart by anyone without necessarily being a mechanic.

Other objects and advantages of the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, in which—

Figure 1, is a perspective view of my shovel with the handle partly broken away. Fig. 2, is a rear view of the same. Fig. 3, is a sectional detail view of the blade and wire taken at the point indicated by the dotted line *x, x*, on Fig. 1, and Fig. 4, is a perspective sectional detail view of the wire removed.

Referring by letter to said drawings:—A, indicates the blade which is formed of wood and is here shown as of a general rectangular contour although it may be of any other suitable shape, and B, indicates the handle.

The blade A, is provided in its longitudinal side edges with a groove or recess *a*, and the front transverse edge is provided with a similar groove or recess *b*, which is designed to receive the wire as will be presently described. This blade is provided on its upper rear side with a vertically disposed transverse strip C, designed to form a rest or support for the handle which assumes an oblique position

with respect to the blade. The opposite side and front edges of the blade are wired by means of a single wire D, for the purpose of protecting said edges and preventing the blade from splitting or becoming otherwise injured. This wire may be round in cross section or of other suitable shape, although I prefer for the purpose of better results to roughen the wire on its engaging sides as shown in Figs. 3, and 4, of the drawings, or the wire may be provided with a single edge instead of a plurality of such edges, if desired. By thus shaping the wire I have found it to seat itself better in the blade and not so liable to come out when in use.

The handle is preferably provided at its forward end with a bevel *c*, and a screw *d*, may be employed for removably securing said beveled end to the blade as shown.

In constructing the shovels, I first place the beveled end of the handle upon the blade and secure it by means of the screw. I then pass the wire around the latter edges and forward transverse edge of the blade within the groove, formed therein, and carry the free ends back obliquely as shown, to the handle. I then pass one of the wires up and around the handle as shown at *e*, and bringing both ends together, I twist or otherwise fasten them as shown at *f*. A loop being thus formed around the handle, when it is desired to remove the latter, by simply taking out the screw *d*, the handle may be drawn out of the loop, and to replace the handle it is simply necessary to insert it through the loop, and after adjusting it apply the screw.

While I have shown and described a wire as extending obliquely on the rear side of the cross bar C, yet in some cases a groove may be formed in the rear of the cross bar or in the rear edge of the blade and the wire carried into said groove before forming the loop.

Having described my invention, what I claim is—

1. As an improved article of manufacture, a shovel having a wooden blade with its sides and forward edge wired, by a continuous piece of wire, substantially as specified.
2. As an improved article of manufacture, a shovel having a wooden blade with its lateral and forward edges provided with a groove, and a wire arranged in said groove, and its

free ends looped around the handle, substantially as specified.

3. The combination with the blade; of the handle secured thereto, and the wire passed
5 around the lateral and forward transverse edge, and its free ends looped around the handle and secured, substantially as specified.

4. The combination with the blade, having the groove in its lateral and forward trans-
10 verse edge; of the wire arranged in said

groove and having its engaging or contact portion roughened or pointed, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN KAERCHER.

Witnesses:

HERMAN GROTOPHORST,
J. A. BUCKLEY.