

J. F. PALMER.  
SNOW-SHOVELS.

No. 195,158.

Patented Sept. 11, 1877.

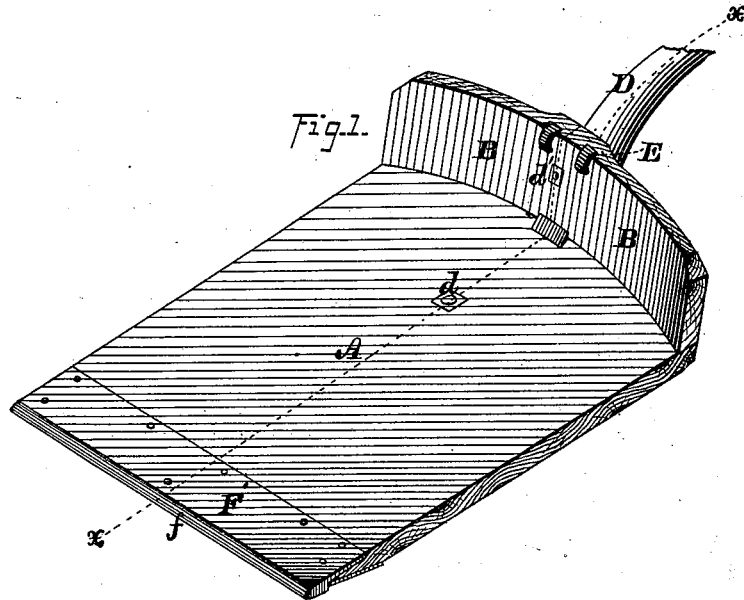


Fig. 1.

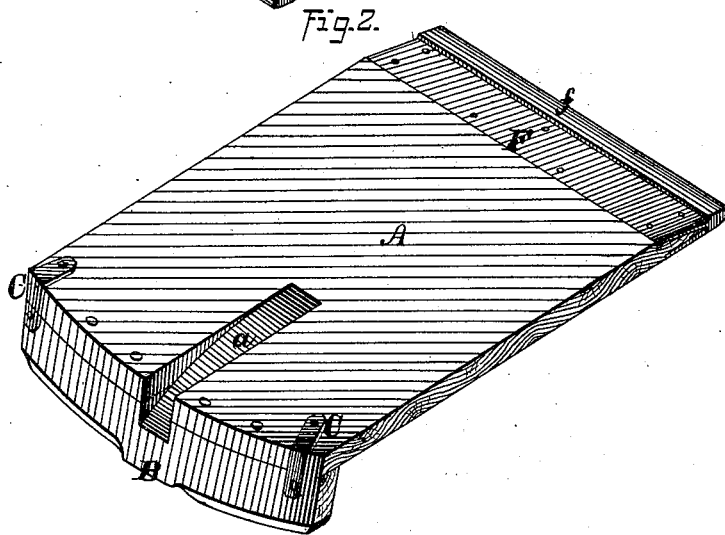


Fig. 2.

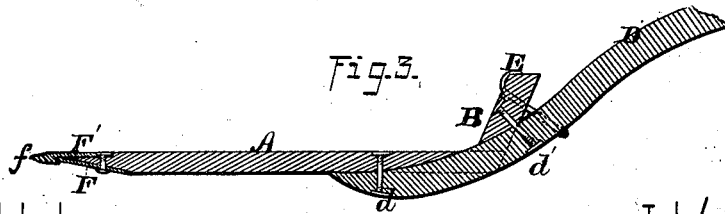


Fig. 3.

WITNESSES:  
*Asst. Hutchinson.*  
*Henry G. Hazard*

INVENTOR.  
*J. F. Palmer, by*  
*Prindle & Co. by his Attys*

# UNITED STATES PATENT OFFICE.

JOSIAH F. PALMER, OF AUBURN, N. Y., ASSIGNOR TO S. W. PALMER & CO.

## IMPROVEMENT IN SNOW-SHOVELS.

Specification forming part of Letters Patent No. 195,158, dated September 11, 1877; application filed June 1, 1877.

*To all whom it may concern:*

Be it known that I, JOSIAH F. PALMER, of Auburn, in the county of Cayuga, and in the State of New York, have invented certain new and useful Improvements in Snow-Shovels; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a perspective view of the upper side of my improved shovel. Fig. 2 is a like view of the lower side of the blade, the handle being removed; and Fig. 3 is a central longitudinal section upon line *xx* of Fig. 1.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to increase the strength and efficiency of snow-shovels; to which end it consists, principally, in the means employed for protecting the edge of the blade, substantially as and for the purpose hereinafter set forth.

It consists, further, in the means employed for combining the blade and handle, substantially as and for the purpose hereinafter shown.

It consists, finally, in the device as a whole, its several parts being constructed and combined in the manner and for the purpose hereinafter specified.

In the annexed drawing, A represents the blade of my shovel, which is constructed of a plain piece of wood, and has preferably a length that considerably exceeds its breadth.

The rear end of the blade A is curved, and at such point upon its upper face is secured a back piece, B, that corresponds in length and in longitudinal configuration to the breadth of said end, and has an upward and a rearward inclination, as shown in Fig. 3.

The back piece B is secured to the blade A by nails or screws *b*, and the joint is further strengthened by means of two or more irons, C, that conform and embrace the rear side of said back piece B and the lower side of said blade, and are secured in place by screws or rivets.

Within the lower side of the blade A and the lower rear edge of the back piece B is formed a right-angled groove, *a*, which extends

in a curve rearward and upward, and receives a handle, D, that closely fills said groove laterally. Said handle, from its lower end, extends upward and rearward in a curve to a point upon a line with the upper edge of said back piece, and from thence curves rearward and upward, its said lower end being thus formed upon double reverse curves, which serve to bring it beneath the blade, while its body is in proper position to be grasped by the hands of the operative.

By means of the groove *a* the handle D is connected to or with the lower side of the blade, and the upper side of the latter thereby left unobstructed, by which construction no liability exists, as in ordinary shovels, to the clogging of snow at the rear central portion of said blade.

The handle D is secured to or upon the blade A by means of a rivet, *d*, which passes through said parts near the lower end of the former, while a second rivet, *d'*, passing through said handle and the back piece B, connects the same firmly together.

If desired, the rivet *d'* may be omitted, and the handle D and back piece B secured together by means of a strap, E, which passes around said handle and through said back piece, with its ends clinched over the upper forward corner of the latter.

The front edge of the blade A is protected from injury and wear by the following means: A plate, F, is placed upon the lower beveled face of the blade A, and a second plate, F', is placed upon the upper face of the same, and the whole secured together by means of rivets, which pass through said parts. The forward edge *f* of the upper plate F' extends beyond the corresponding edge of the plate F, and is turned downward, rearward, and upward, and abuts against the edge of the latter. Such doubled portion, having greater thickness than both plates combined, projects downward sufficiently to afford a perfect protection to the edge of said lower plate, and relieves the same from all wear and strain.

By this construction of the shield the edge of the shovel is completely protected, and a strong and durable shield is produced at a comparatively small expense.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The blade A and back piece B, provided with the groove *a*, combined with the curved handle D by means of the rivets *d d'*, substantially as and for the purpose shown.

2. As a means for protecting the edge of the blade A, the plate F, secured to the lower side of said blade, and the plate F', secured to the upper side of said blade, and having its forward thickened edge *f* bent downward and backward, so as to protect the corresponding edge of said plate F, substantially as and for the purpose set forth.

3. The hereinbefore-described snow-shovel, in which the blade A, back piece B, angle-irons C, handle D, rivets *d* and *d'*, and plates F and F', are constructed and combined in the manner and for the purpose substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of May, 1877.

J. F. PALMER.

Witnesses:

S. W. PALMER,  
HORACE T. COOK.