

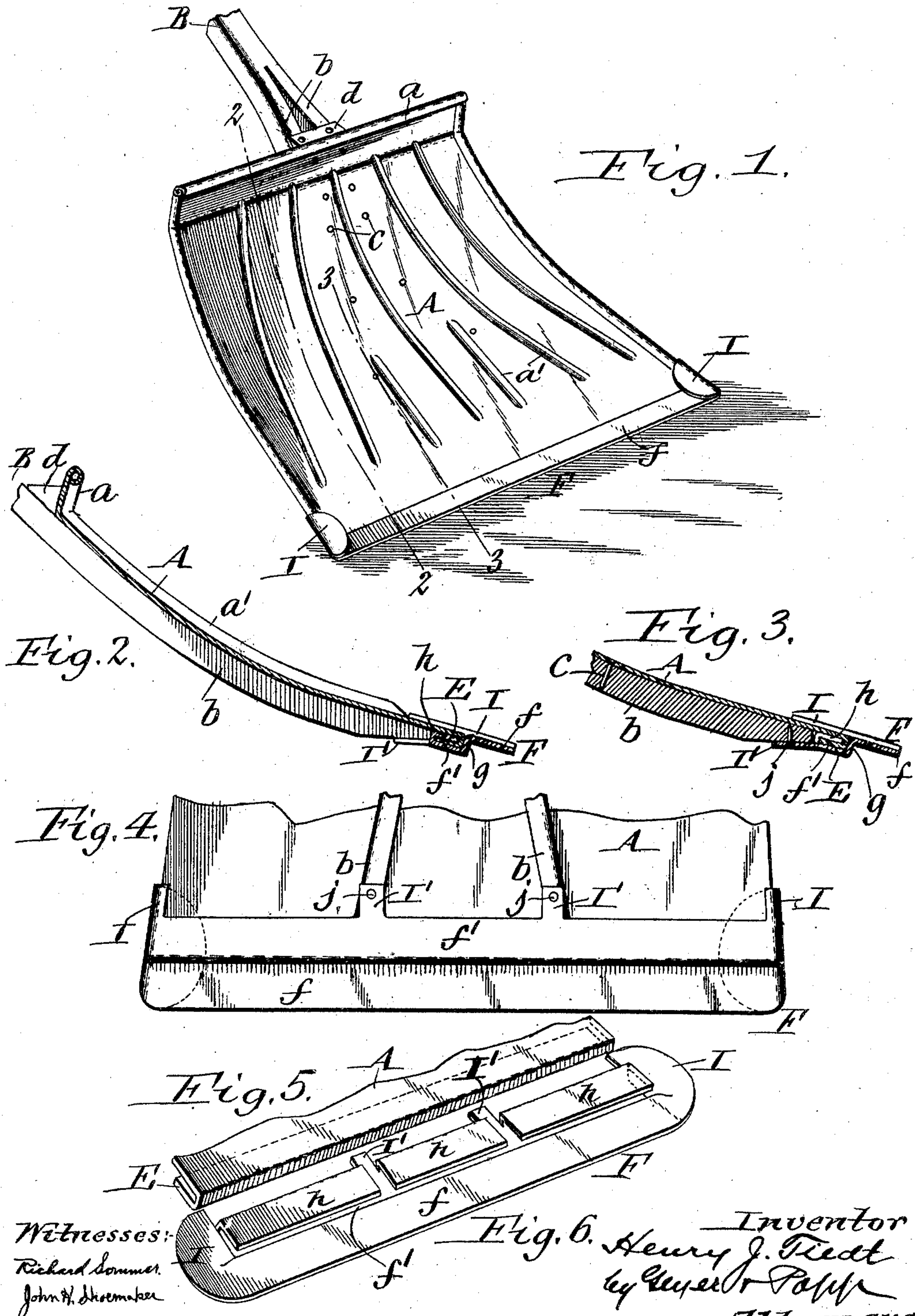
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SHOVEL.

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967,270.

Patented Aug. 16, 1910.



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UNITED STATES PATENT OFFICE.

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SHOVEL.

967,270.

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To all whom it may concern:

Be it known that I, HENRY J. TIEDT, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Shovels, of which the following is a specification.

The object of this invention is to provide a shovel having a sheet metal blade with a tip which is securely attached thereto without the use of rivets and whereby an article of greater strength and durability and at relatively less cost is produced.

In the accompanying drawings: Figure 1 is a perspective view of a snow shovel embodying my improvements. Figs. 2 and 3 are vertical longitudinal sections in the correspondingly numbered lines in Fig. 1. Fig. 4 is a fragmentary bottom plan view of the tip and the adjacent part of the blade of the shovel. Fig. 5 is a fragmentary perspective view of the blade. Fig. 6 is a detached perspective view of the tip.

Similar letters of reference indicate corresponding parts throughout the several views.

A represents the sheet metal blade of the shovel which may be of the usual curved form and provided at its upper edge with a transverse shoulder or flange *a* and a plurality of longitudinal stiffening ribs *a'*.

B represents the handle which may be of any usual or approved construction but is preferably provided at its lower end with spread arms *b* which are secured to the rear side of the blade by nails *c*, as shown in Figs. 1 and 3. Between the handle and the upper flange *a* of the blade a brace block *d* is secured as usual. At its lower or front edge the blade is provided with a downwardly and rearwardly bent coupling flange *E* forming a channel which opens rearwardly.

F represents the sheet metal tip of the shovel which is arranged at the front edge of the blade and which is constructed of stronger and harder metal so as to more effectually resist wear. This tip comprises an elevated front plate *f* which is arranged in front of the blade and preferably flush with the upper side thereof, a depressed rear plate *f'* arranged below the blade flange, an upright web *g* connecting the opposing edges of the front and rear plates and forming a rearwardly facing shoulder which bears against the bight connecting the front

edges of the blade and its front flange, and a flange *h* bent from the rear edge of the rear plate upwardly and forwardly and forming a channel which opens forwardly and arranged in the channel between the underside of the blade and the front flange thereof. After the blade and tip are thus assembled the same are pressed together flatwise, thereby causing the same to be connected by a seamed joint. When the blade and tip are united in this manner the same are held against lengthwise movement relatively to each other, the tip being held against forward movement by reason of its flange being interlocked with that of the blade, and the tip being held against backward movement by reason of its web engaging with the bight at the front edges of the blade and its front flange.

The tip is prevented from being turned downwardly relatively to the blade and held with its front plate in alinement with the same by means of two lips *I* which are bent upwardly and inwardly from opposite ends of the tip and over the side edges of the blade, as shown in Figs. 1 and 4. By this means the tip is securely attached to the blade without the use of any rivets, nails or screws, whereby the amount of labor in making the shovel and the cost of producing the same is materially reduced. Furthermore, the tip is not liable to become loose and the shovel presents a neater and more finished appearance.

For the purpose of increasing the strength of the shovel the handle and tip are connected by means of lips *I'* projecting rearwardly from the rear edge of the rear plate and secured to the underside of the handle arms by rivets *j*, as shown, or otherwise.

The plates, web, flange and lips of the shovel tip are preferably stamped from a single sheet of metal.

I claim as my invention:

1. A shovel comprising a blade provided at its front edge with a downwardly and rearwardly bent flange, and a tip provided with an elevated front plate arranged in front of the blade, a depressed rear plate arranged below said blade flange, an upright web connecting the opposing edges of the front and rear plates and bearing against the bight at the front edges of the blade and its flange, and a flange bent upwardly and forwardly from the rear edge

of the rear plate and arranged between said blade and its flange.

2. A shovel comprising a blade provided at its front edge with a downwardly and rearwardly bent flange, and a tip provided with an elevated front plate arranged in front of the blade, a depressed rear plate arranged below said blade flange, an upright web connecting the opposing edges of the front and rear plates and bearing against the bight at the front edges of the blade and its flange, a flange bent upwardly and for-

wardly from the rear edge of the rear plate and arranged between said blade and its flange, and lips bent from the ends of the tip upwardly and inwardly over the side edges of the blade.

Witness my hand this 7th day of February, 1910.

HENRY J. TIEDT.

Witnesses:

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