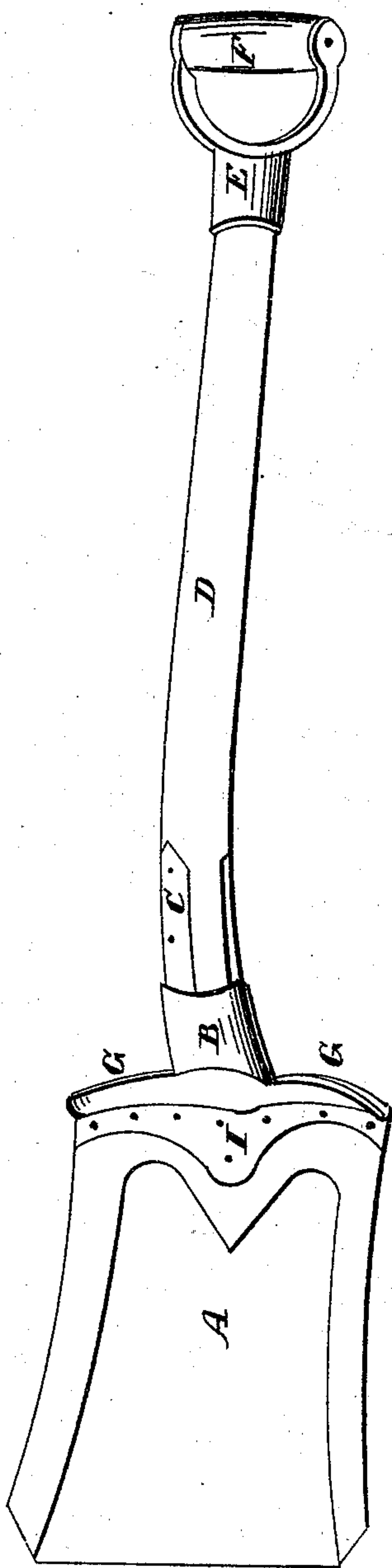


H. KIMBALL.

Shovel.

No. 8,635.

Patented Jan. 6, 1852.



# UNITED STATES PATENT OFFICE.

HIRAM KIMBALL, OF WORCESTER, MASSACHUSETTS.

## IMPROVEMENT IN THE CONSTRUCTION OF SHOVELS.

Specification forming part of Letters Patent No. 8,635, dated January 6, 1852.

*To all whom it may concern:*

Be it known that I, HIRAM KIMBALL, of Worcester, in the county of Worcester and Commonwealth of Massachusetts, machinist, have invented a certain new and useful Improvement in the Common Shovel for Shoveling Earth, Manure, Coal, Grain, or other Loose Substances, to be called "Kimball's Patent Shovel;" and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawing, which is made a part of this specification.

The drawing represents in perspective a front and lateral view of my shovel, and of all the parts thereof an exclusive property wherein I am desirous of securing to myself and my legal representatives by Letters Patent, to wit:

A represents the front side of the blade of the shovel, to be made of steel, iron, copper, wood, or other material, according to the purposes for which the shovel is to be applied.

B G G I represent the front side of the attachment for connecting the handle with the blade, consisting of the lip I, the flange G G, and the socket B. The attachment is a casting made of strong malleable iron or other metal, and is fastened to the blade by eight or more screws or rivets passing through both the lip and the upper end of the blade. The heads of the rivets or screws are the more prominent upon the back side of the blade, and their position is indicated by the corresponding dots on the front side of the lip I. The heads of the rivets or screws so formed upon the back of the blade are at points where the same is depressed, and particularly in the middle thereof, so that these heads are not liable to be worn off, or if they are the rivets or screws may be easily renewed and the shovel thus restored to its original strength; and when the blade of the shovel is worn out it may readily be detached from the handle by knocking out the old rivets or screws. A new blade may then be put on, as before described, and thus at small expense the shovel may be restored, to be as good as when new.

G G represent the flange of the attachment at the bottom of the socket B, and projecting forward over the lip I, and extending along the top of the blade from one side to the other.

This flange answers a threefold purpose—forming the upper part of the tray or scoop of the shovel, a convenient stirrup for the foot of the operative when he desires to press down the shovel, and two lateral braces extending from the center of the top of the blade to the circumference, and thus adding greatly to the strength of the implement at the point where the failure of the old kind of shovels has demonstrated that such strength is most needed.

B represents the socket that receives the lower end of the stock of the handle, and this, together with the lip and the flange, constitutes what I have called the "attachment."

G represents an iron strap passing under the lower end of the stock of the handle, with the ends brought up on the front and back sides of it. After this strap is so applied to the lower end of the stock, the stock is driven through an iron tunnel, the lower orifice of which is just the size of the stock, so that by this process the iron strap is perfectly bedded in the wood. The lower end of the stock, with the iron strap so bedded in it, is then driven into the socket, which is nicely fitted to receive it, and by means of three or more rivets or screws passing quite through the stock and embracing both ends of the strap and the socket the attachment of the handle to the blade is made perfect.

D represents the stock of the handle, and may be made of any wood the fiber of which is strong and unyielding. This stock is simply a cylindrical piece of wood slightly tapering upward, without any enlargement at the top for the hand, as in the old kind of shovels, and thus at least four hundred per cent. of timber is saved in making this part of my shovel.

E represents the socket that receives the upper end of the stock, and this socket, together with the ribs extending upward from each side of it, is a casting made of malleable iron or other metal. The upper end of the stock is firmly fitted to this socket, and is further secured by a rivet or screw passing through them both. The ribs extending upward from this socket form a curve suitable to receive the hand of the operative, and at the top of each rib is a round perforated swell.

F represents a small cylinder, made of wood, bone, ivory, or other hard material, and this cylinder, being perforated longitudinally through



its center, receives a strong metallic rivet, which also passes through the perforated swells of the ribs, and thus forms a strong, easy, and perfect handle, without that liability to split and break observable in shovels heretofore used.

The mode of operating with my improved shovel needs no description. It is the same as with the shovel now in common use. The utility of my invention consists in the accomplishment of more work and with greater ease in a given time, in the simplicity of the process of making and restoring my shovel, in its durability, and hence the great saving and economy in the use of it.

What I claim as my invention, and desire to secure by Letters Patent, is an improvement in the construction of the common shovel, as follows, to wit:

1. The attachment of malleable iron or other metal, consisting of the lip, the flange, and the socket, and the mode of fastening the same to the blade, as hereinbefore described.

2. The mode of fastening the lower end of the stock to the handle by means of a socket and single strap with the ends deflected upward on the front and back side of the stock, and thus connecting the handle with the blade of the shovel.

3. The construction of the upper end of the handle, consisting of the socket, the ribs, the cylinder, and the rivet, and the mode of connecting the same with the upper end of the stock by means of the socket, as substantially and fully hereinbefore set forth.

In witness whereof, I the said HIRAM KIMBALL, have hereunto set my hand, in the presence of the witnesses whose names are hereto subscribed, this 25th day of October, A. D. 1851.

HIRAM KIMBALL.

Witnesses:

JOHN W. LINCOLN,  
IRA M. BARTON.