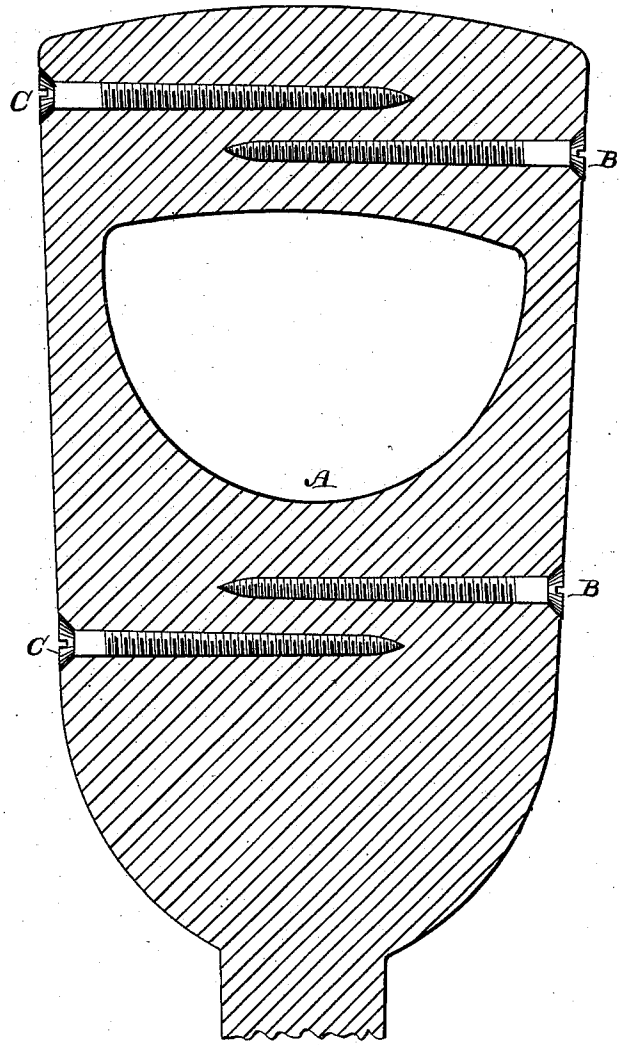
(No Model.)

# C. A. MAYNARD.

## SHOVEL HANDLE.

No. 375,454. Patented Dec. 27, 1887.




WITNESSES

E. C. Newman,

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# UNITED STATES PATENT OFFICE.

CHARLES A. MAYNARD, NORTHAMPTON, MASSACHUSETTS.

## SHOVEL-HANDLE.

SPECIFICATION forming part of Letters Patent No. 375,454, dated December 27, 1887.

Application filed May 5, 1887. Serial No. 237,229. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. MAYNARD, of Northampton, in the county of Hampshire and State of Massachusetts, have invented a certain new and useful Improvement in Shovel-Handles, of which the following is a specification, reference being had to the accompanying drawings.

Heretofore the "D-handles," as they are termed, of ordinary shovels and spades have been made of wood, and provided with iron bolts extending through the handles from edge to edge, and held in place by riveting or upsetting their ends. There are of course some merits in, but there are also various objections to, this method of strengthening wooden shovel-handles. Wood strengthening-pins, passing entirely through the D-handles from side to side, have also been employed with certain advantages.

The object of my invention is to provide a still different and improved means of strengthening D-handles and preventing their warping or splitting. Accordingly, I employ ordinary metal wood-working screws, which I insert on either side of the handles, but not opposite each other, so that their ends shall pass each other. These screws, being pointed at their ends, can be set in without previously boring any holes, and screwed in so firmly that their heads will be sunk flush with the wood surface, or a trifle below it, and they require no fastening to hold them in place. As their ends pass each other, the central portion of the D-shaped handle, where warping-strain is greatest, and where the handle is most likely to split, has practically the advantage of double bolts, and thus has double security against splitting or warping. Further than this, in case of the contraction of the wood as it gets old and more thoroughly seasoned the screws can be set in farther with perfect convenience, so that in that way compensation for change of condition of the wood is provided for.

In the accompanying drawing is shown a shovel-handle provided with my improved security against splitting and warping.

A indicates the handle; and B B and C C, the screws inserted from either side and passing each other in the central portion of the handle, as shown. I thus provide the cheapest and most effective security not only for shovel-handles newly manufactured but for those that have become old and shrunken.

What I claim to be new, and desire to secure by Letters Patent of the United States, is—

As an improvement in D-shaped wooden shovel-handles, the combination, with such a handle, of the screws inserted from opposite sides, so as to pass each other in the central portion of the wood and doubly strengthen it there, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

CHARLES A. MAYNARD.

Witnesses:

H. M. ABBOTT,

WM. H. CLAPP.