W. Ballard,

Spike.

No. 2,182. Patented July 17, 1841.

Fig 7.

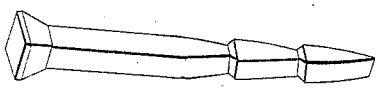


Fig 6.

Fig 5.

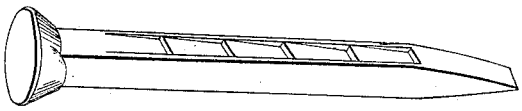


Fig 5.

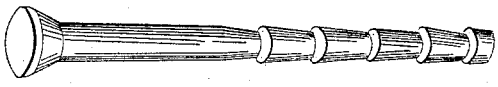


Fig 4.

Fig 3.

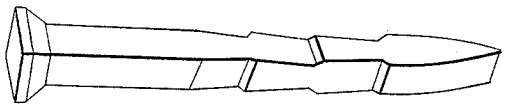


Fig 2.

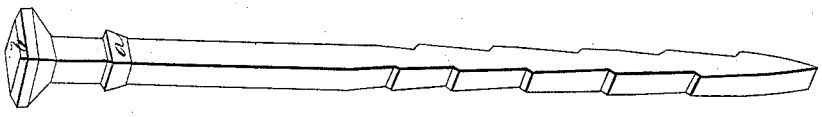
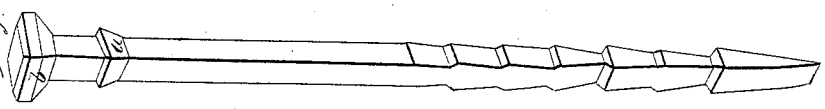


Fig 1



UNITED STATES PATENT OFFICE.

WM. BALLARD, OF NEW YORK, N. Y.

MANNER OF FORMING SPIKES AND NAILS.

Specification of Letters Patent No. 2,182, dated July 17, 1841.

To all whom it may concern:

Be it known that I, WILLIAM BALLARD, of the city of New York, State of New York, have made an Improvement in the Manner of Forming Spikes or Nails to be Driven into Wood; and I do hereby declare that the following is a full and exact description thereof.

The improvement in spikes, or nails, consists in making offsets, or indentations, one or more in number, on the opposite sides of or around, their shanks, which offsets, or indentations, are to be in such form as not to be calculated to cut, or tear, the wood, as is the case with those which have beards, or projecting points, or serrated edges formed upon them by means of a cold chisel, or by some analogous means, in the manner which has been frequently resorted to. My spikes, or nails, may be made in a variety of forms, and of different materials. They will in most cases be formed of iron by means of suitable machinery, or by swages, in a manner well known to smiths; or they may be made by casting them of any suitable composition metal, when required to be used in fastening the plank of vessels, or other articles requiring the use of such metal.

In the accompanying drawing, I have shown a variety of forms in which I make my spikes.

In Figures 1 and 2, besides the indentations, or offsets, formed on the shank of the spike toward its point, or entering end, there is a projecting part *a*, *a*, constituting a secondary head, of smaller size than the proper head, *b*, *b*; this part, like the offsets in the lower part of the spike, will, after it has been driven into the wood, have the wood close upon it so as to adhere thereto with great firmness. The main use of this projection, or secondary head, is not merely to aid in holding down the plank through which it is driven, but in case of the crippling, or breaking off, of the head proper it serves to confine the plank, and to secure it in place, so that it cannot start off. The offsets on the shank may be variously modified, as shown in the respective figures. That shown in Fig. 2, I deem one of the best, the offsets not being directly opposite to each other, but standing intermediately will drive with more ease than where they are immediately opposite; they will also possess greater strength with the same quantity of material.

Figs. 3, and 4, represent spikes similar, in general, to Figs. 1, and 2, but stouter, and without the secondary head.

Fig. 5, is a round spike, or bolt, represented as of the same diameter throughout, excepting at the depressions necessarily made to form the offsets.

Figs. 6, and 7, are square nails, or spikes, of a smaller size, but dependent in use upon the same principle of construction.

Fig. 8, represents a form of spike for which a patent was granted to Thomas W. Harvey on the 13th of September 1832, and denominated by him the grooved and flanged spike; this spike he proposed sometimes to make serrated at the bottom of the groove, as represented in the drawing; and this is the nearest approach to my spike with which I am acquainted, but the cuts, or serrations, were not of the same character with my offsets, and in the actual manufacture they were omitted, the wings, or flanges, which constituted the claim under that patent being the points depended upon; and the said Harvey, after full examination, does not consider my spikes as interfering with those patented by him, which he evinces by putting his signature to this instrument as one of the subscribing witnesses thereto. My spikes have also been tested by engineers, and by ship carpenters, and preferred to any others, as being applicable to purposes for which the flanged spikes would not answer.

What I claim as constituting my invention, and desire to secure by Letters Patent, is—

1. The forming of spikes, or nails, with offsets, or indentations, which offsets are without sharp, or cutting edges, so that when driven they shall not injure the wood, but shall hold firmly by the collapsing of the wood upon them.

2. I also claim the forming of the secondary head, for the purpose, and in the manner, set forth.

WILLIAM BALLARD.

Witnesses:

THOS. W. HARVEY,

GEO. B. FISK.