

G. N. SANDERS, Jr.
Spikes.

No. 142,284.

Patented August 26, 1873.

Fig: 1.

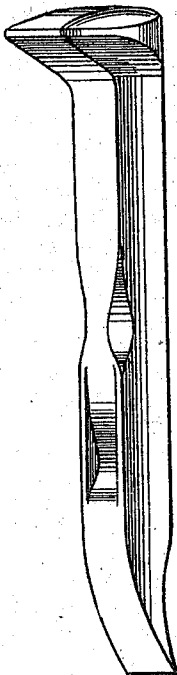


Fig: 2.

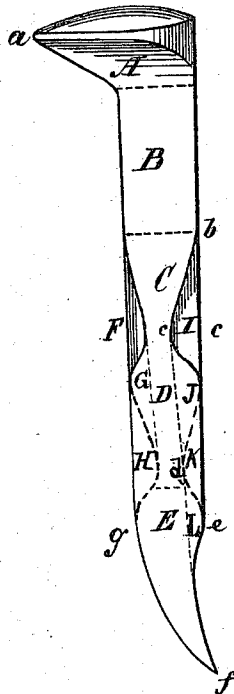
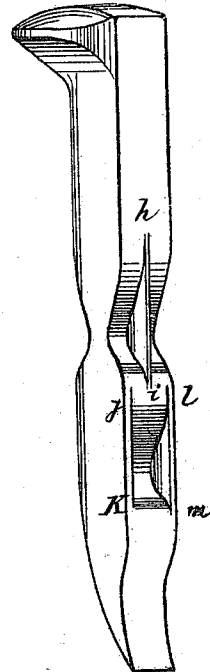


Fig: 3.



Witnesses:

Richd. B. Tunstall.
Louis A. Wagner.

Inventor:

George N. Sanders Jr.

UNITED STATES PATENT OFFICE.

GEORGE N. SANDERS, JR., OF NEW YORK, N. Y.

IMPROVEMENT IN SPIKES.

Specification forming part of Letters Patent No. 142,284, dated August 26, 1873; application filed August 6, 1873.

To all whom it may concern:

Be it known that I, GEORGE N. SANDERS, Jr., of New York city, New York State, have invented the Improvement in the Curvo Spike secured by Letters Patent No. 140,844, dated July 15, 1873, to George N. Sanders and myself, of which improvement the following is the specification:

Referring to the figures in the accompanying drawing, A is the head; *a*, the hook on the head; B, the upper part of the spike, between the head and shoulder; C, the shoulder; D, the neck; E, the tail; G, J, and L the protuberances on, and F, H, I, and K the depressions, grooves, and notches in, the sides of the spike; and *h i*, *j k*, and *l m*, the ridges on the neck.

The figures represent the size corresponding to the common hook-head railroad-spike, Figures 1 and 3 quarter views, and Fig. 2 a side view, of the same spike.

The improvement consists in, first, the protuberances, depressions, grooves, and notches on and in the sides, whose peculiarity consists in the depressions, grooves, and notches being sloped very gradually upward and less gradually downward, the protuberances being sloped contrariwise, and all being designed to offer the least resistance to the driving of the spike, but to insure sufficient tenacity of hold, while permitting its extraction without tearing or lacerating the fibers of the material into which it is driven. They are also designed to be of slight enough depth and located on the sides far enough below the surface of the material into which the spike is driven not to diminish its strength or increase its liability to break by the action of any force applied to the head when the spike is embedded. For ordinary uses all the protuberances and depressions are not required, and

their shape is quite immaterial, provided they have the proper upward and downward slopes. Second, the ridging of the neck so as to increase its stiffness, with but little increase of weight, that the shank may bend only very slightly or not at all. One ridge in the middle will answer the purpose, although more may be used. Third, the concaving of the tail from *e* to *f*, which increases the deflecting force as well as the sharpness of the point, and renders it possible to make the spike bend sufficiently in the wood or other material without having it so thin at the neck as to bend before entering the wood, or so blunt at the point as to tear the wood, which without this concaving could not be accomplished.

The shape of the head and of the perimeter of the shank are immaterial, except that they should be adapted to the uses for which the spike is intended, such as ship-building, fastening the cross-pieces to telegraph-poles, bridge-building, &c. The various sizes are adapted to many of the uses of nails, bolts, pins, tacks, and similar fastenings adapted to being secured by being driven in wood or other material.

I claim as my invention—

The improved curvo spike A B C D E with the protuberances, depressions, grooves, or notches F G H I J K L, the ridges *h i*, *j k*, *l m*, and the concavity *e f* at the point, substantially as described, and for the purposes mentioned.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses.

GEORGE N. SANDERS, JR.

Witnesses:

RICHD. B. TUNSTALL,
LOUIS A. WAGNER.