(No Model.)

S. M. GUSS.

CUT NAIL.

No. 337,765. Patented Mar. 9, 1886.

Fig. 1.

Fig. 2.

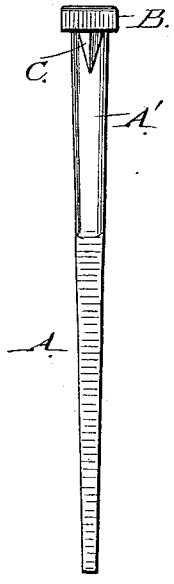


Fig. 4.

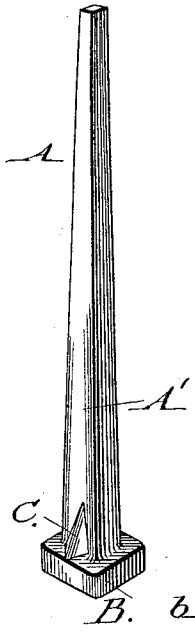


Fig. 3.

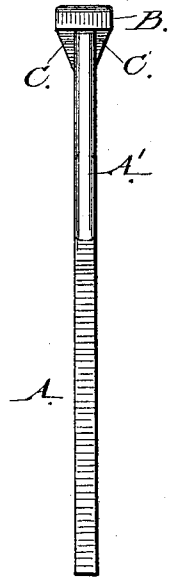


Fig. 5.

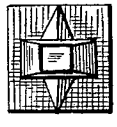
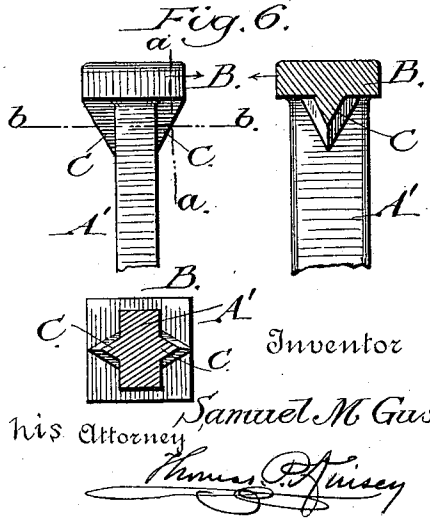


Fig. 6.



Witnesses
T. Vaeter Fowler.
H. B. Applewhaite.

Inventor
Samuel M Guss
By his Attorney
Thomas P. Kinsey

UNITED STATES PATENT OFFICE.

SAMUEL M. GUSS, OF STEELTON, ASSIGNOR OF ONE-HALF TO JACOB S. AMMON, OF READING, PENNSYLVANIA.

CUT NAIL.

SPECIFICATION forming part of Letters Patent No. 337,765, dated March 9, 1886.

Application filed December 3, 1885. Serial No. 184,636. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. GUSS, a citizen of the United States, residing at the town of Steelton, county of Dauphin, State of Pennsylvania, have invented a new and useful Improvement in Nails, Spikes, &c., of which the following is a specification.

This improvement is more particularly related to nails and spikes manufactured of steel or metal of a kindred character, but is also applicable as an improvement to the ordinary wrought-iron cut nail.

The object of the improvement is to enable nail-manufacturers to make a nail, spike, &c., from steel-plate that will successfully compete with the ordinary wrought-iron cut nail as to ability to resist the blows upon the head in driving, and also as to the number of nails, spikes, &c., to the keg, the improvement admitting of a lighter nail or spike than is now possible from steel or metal of a kindred character.

I do not profess to have discovered any new law for the flow of metals from which nails, spikes, &c., may be cut upon a machine, the sole aim of my invention being to construct a nail or spike that will have its head supported at the right point, and to produce such nail or spike without any additional cost, by adapting the dies for the ordinary cut nail and spike machines by a simple change therein to make nails or spikes with my improvement attached thereto.

The accompanying drawings, forming a part of this specification, show very fully the nature of my improvement, similar letters of reference indicating similar parts throughout.

Figure 1 represents the ordinary nail for the purpose of comparison. Fig. 2 represents in front elevation a nail with my improvement added thereto. Fig. 3 is a side or edge elevation of the same. Fig. 4 is a reversed elevation showing more clearly the addition made to the nail; Fig. 5, a plan of the nail looking down upon the reversed nail; Fig. 6, a portion of a nail enlarged, to show the sections of the supports.

In the drawings, A represents the nail, A′ the portion of the same grasped by the dies while the head is being formed, B the head, and C my improvement placed upon the nail or spike.

It will be seen that the improvement consists in a bracket-support given to the head upon opposite sides of the body A′, and a cross-section of this bracket in its preferred form, taken in either a vertical or horizontal direction, as at *a a* or *b b* of Fig. 6, will show a cutting-edge to the same. A square-base pyramid cut through its vertical height diagonal to the base-corners, (which may be square or slightly rounded,) and the cut portions placed upon the opposite sides of the nail will fairly represent the form of bracket used. I prefer to make the depth of the bracket upon the face of the nail or spike equal to about twice its projection under the head.

I am aware that nails and spikes have been made with a continuous support to the head, carried up from the body of the nail or spike as a concave fillet, and made with special reference to a steel nail; but the practical objection to such product is that the fillet forms a wedge which, when the head reaches the timber, invariably splits the same. What is wanted is a head supported so as to withstand driving, and yet will sink as readily within the material without splitting it as the ordinary cut-nail head. As a sample of fillet-supported head see Patent No. 318,845, May 26, 1885, J. Young. On comparing the above with my improvement it will be seen that I give the requisite support without the fillet, and that the support will cut across the grain of wood in driving and will sink in the same without splitting.

I am also aware that a shoe-peg with a bracket of parallel thickness and tapering from the outer edge of the head to its termination upon the body of the nail was patented to Hyslop as No. 300,077, June 10, 1884; but the same is not adapted to be used for building or timber construction purposes, having the same peculiarity of splitting the wood as the Young nail, before described.

The objection to steel nails as heretofore made is twofold, the first and most serious being the liability to part with their heads, and the second that in the endeavor to give more support to the head the weight of the nail or

spike was individually increased to a small extent, not much with reference to a single piece, but in the aggregate of one hundred-pound kegs reducing the number of pieces, to the loss of contractors where estimates were based upon the usual number of cut nails to the keg.

I prefer to have the brackets occupy about one-fourth (or more) of the width of the body A′, as practically that is found to be sufficient thickness for the same immediately under the head.

To adapt the dies of machines now employed in making cut nails and spikes to manufacture nails and spikes with my improvements is simply to take a triangular or three-cornered file and file a wedge-shaped or V-gutter in the dies at the proper point for the support, cutting to the full depth of the head at the end upon which the head is formed, and terminating the cut upon the inner faces of the dies at about the twice the depth of the cut upon the ends of the same, or in an equivalent manner.

Having shown the construction and advantages of my improvement, I desire to claim as follows:

1. As a new article of manufacture, a cut nail or spike having a bracket-support to the head upon opposite sides of the nail or spike and integral with the body and head of the same, said bracket being in form that of a square pyramid cut through its vertical height diagonal with the base of the same, substantially as shown, described, and for the purpose set forth.

2. As an improved construction of a cut nail or spike, the addition of a bracket-support to the head upon opposite sides of the body of the nail or spike, said bracket being in thickness less than the width of the nail or spike, and having a tapered form in both its vertical and horizontal section, substantially as shown, described, and for the purpose set forth.

SAML. M. GUSS.

Witnesses:
CHARLES H. BABB,
R. M. FREY.