

T. T. PROSSER.

METALLIC RODS AND WIRE FOR USE IN PEGGING MACHINES, &c.

No. 169,838.

Patented Nov. 9, 1875.

Fig. 1.



Fig. 2.

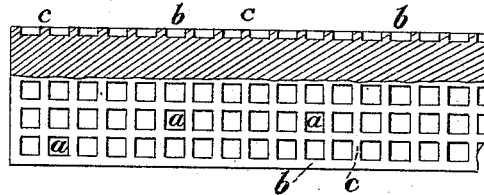
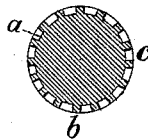


Fig. 3.



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# UNITED STATES PATENT OFFICE

TREAT T. PROSSER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN METALLIC RODS AND WIRE FOR USE IN PEGGING-MACHINES, &c.

Specification forming part of Letters Patent No. 169,838, dated November 9, 1875; application filed October 4, 1875.

*To all whom it may concern:*

Be it known that I, TREAT T. PROSSER, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Metal Rods and Wire, of which the following is a specification:

The object of my invention is to increase the holding capacity of nails or spikes made of metal rods or wire; and to this end my improvement consists in providing such rods or wire with a honey-combed or cellulated surface by pressing regular rows of indentations into them, the rows of indentations or cells being divided by continuous longitudinal ribs, intersected by transverse ribs, which together preserve the stiffness of the rod or wire, and cause a nail made of it, when driven, to enter the material with no more damage to the fibers thereof than an ordinary smooth-surfaced nail would occasion, while it has this advantage over the smooth nail, that its cells afford numerous places where the fibers of the material can interlock with the nail to prevent its withdrawal.

In forming the honeycombed surface the wire or rod is so operated upon that its cylindrical form in cross-section, and the smoothness of the non-indented surface—that is, the ribs—will be preserved, and that the indentations or cells will be radially impressed, so that the depth of the cell will be the same at the opposite sides of the arc spanned or included by it.

In the annexed drawings, Figure 1 illustrates a thin wire indented in accordance with my invention. Fig. 2 illustrates a thick metal rod thus constructed, partly in section, and partly in plane-surface view. Fig. 3 is a transverse section of a rod such as shown in Fig. 2.

The drawings, especially Figs. 2 and 3, clearly exhibit the leading characteristics of my invention.

The entire surface of the rod or wire is covered with regular rows of indentations or cells *a*, which in this instance are square, but which may have any other preferred contour. These rows of cells are divided by continuous longitudinal ribs *b*, which are straight in this case, but may be spiral, connected by the transverse ribs *c*, which give a reticulated appearance to the rod or wire.

By reason of the provision of continuous longitudinal ribs and connecting transverse ribs, I am enabled to honeycomb the surface of fine wire without injuriously affecting its stiffness.

The rows of cells are pressed into the surface of the rod or wire, preferably by a pair of suitably constructed and operating rolls, leaving the ribs project. Nails made of such honeycombed rods or wire cannot, when driven, easily turn in the material, though they may be cylindrical in cross-section, which feature is of considerable moment in nails used for certain kinds of work. In thicker rods it is not essential that the cells should be arranged in parallel (whether straight or spiral) longitudinal rows; but in thin wire this is absolutely necessary, in order to obtain continuous (either straight or spiral) longitudinal ribs, to preserve the stiffness of the wire.

I am aware of the existence of a nail-strip for boot and shoe pegging machines composed of a number of united nails, the opposite sides of each of which have indentations on either side of a longitudinal rib. This is an entirely different article, considered as a whole, from a honeycombed wire or rod. The difference between nails cut, respectively, from such a strip and a wire or rod such as I have described is as great and as distinctive as the difference between the strip and the wire. The strip-nail, being severed lengthwise from the strip, is left with two ragged longitudinal ribs or webs, which will cut the fibers of the material into which they are driven with a filing action. The ribs on the surface of the wire nail obtained by cutting a length from the wire transversely are not affected by this severance, and remain uniform and smooth, and will not file or rasp the material. By reason of the peculiar construction of the nail-strips the indentations are not equal in depth at opposite sides. The cells in the wire nail are of even depth, and in consequence its holding capacity is greater. The comparative strength is obviously much in favor of the wire nail.

I do not claim to be the first to form indentations on metal, whether in plate form or in the form of wire, subsequently to be cut up into nails; but my invention consists in giving a uniform honeycombed surface to rods or wire, preserv-

ing its cylindricity and the smoothness of the ribs or webs left projecting, the cells being also so impressed upon it as to give uniform depth to them. I thus produce an article which possesses distinctive, easily recognizable peculiarities, and valuable new and useful qualities, inherent in no other article of this kind heretofore known.

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

1. As a new article of manufacture, metal rods or wire having a honeycombed or cellulated surface, substantially as and for the purpose specified.

2. Honeycombed or cellulated wire, the cells of which are arranged in parallel (whether straight or spiral) longitudinal rows, divided by continuous longitudinal ribs and connecting transverse ribs, substantially as and for the purpose specified.

In testimony whereof I have signed my name to the foregoing specification in the presence of two subscribing witnesses.

TREAT T. PROSSER.

Witnesses:

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