(No Model.)

W. H. BAILEY.

SPIKE.

No. 262,344. Patented Aug. 8, 1882.

Fig. 1

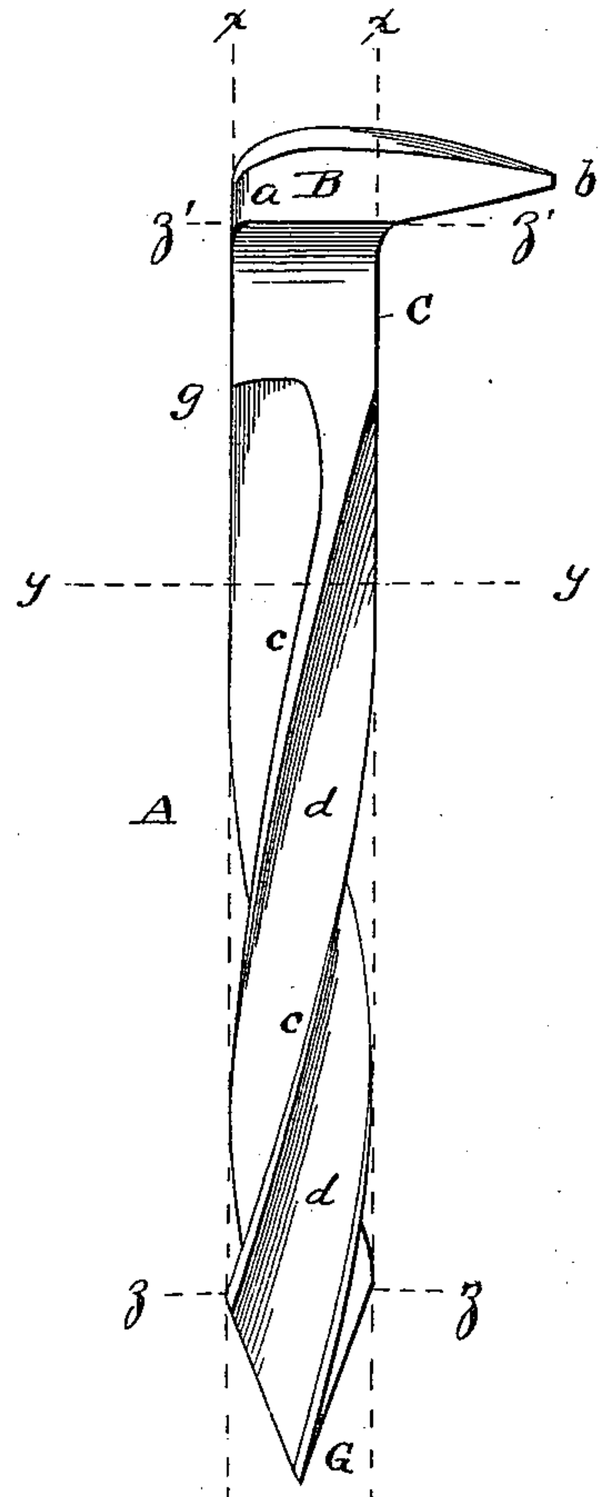

Fig. 2.

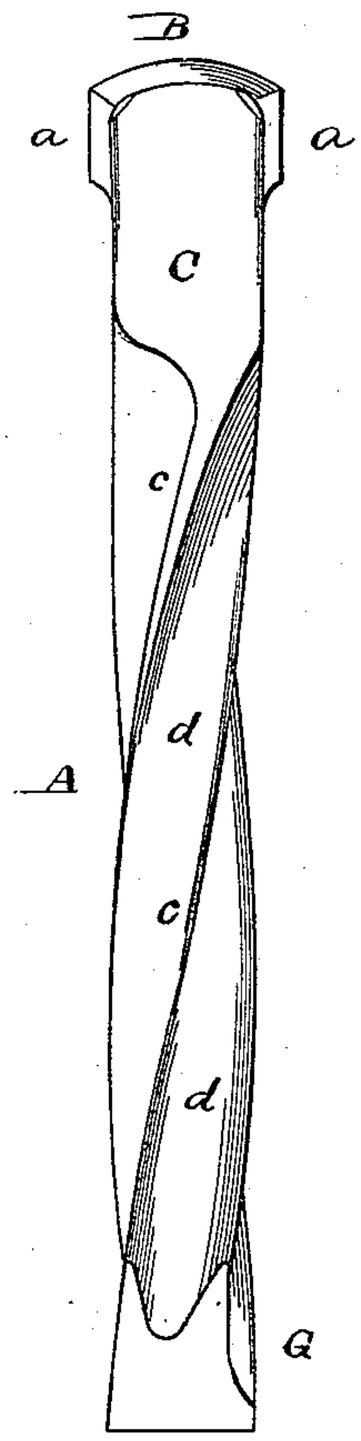

Fig. 3.

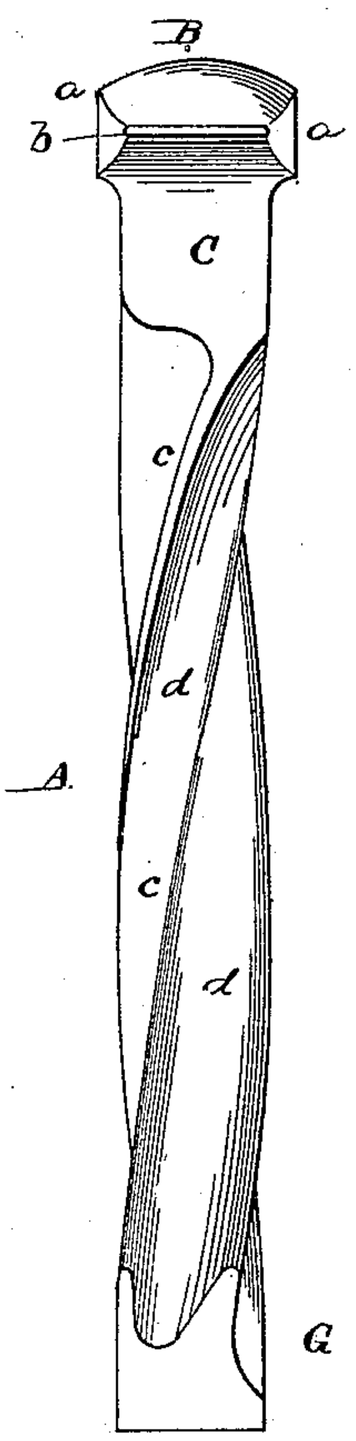

Fig. 4.

Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM H. BAILEY, OF MINNEAPOLIS, MINNESOTA.

SPIKE.

SPECIFICATION forming part of Letters Patent No. 262,344, dated August 8, 1882.

Application filed July 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BAILEY, of Minneapolis, in the county of Hennepin, and in the State of Minnesota, have invented certain new and useful Improvements in Spikes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to spikes which are especially designed for holding down railroad-rails, but which may be used for other purposes; and the nature of my invention consists in a spike which may be made of iron or other metal, and which is formed from straight rods of even thickness, having a straight shank, helically-formed fins or webs, and a chisel-edge, all as will be fully understood from the following description, when taken in connection with the annexed drawings, in which—

Figure 1 represents a side view of my improved spike, the dotted lines *x x* indicating the straight rod from which it is formed. Fig. 2 is a back view of the spike. Fig. 3 is a front view. Fig. 4 is a top view. Fig. 5 is a cross-section taken in the plane indicated by the dotted line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

The letter A designates the body of my improved spike; B, the head thereof; C, the shank, and G the entering or penetrating point.

The body of the spike, when taken in cross-section, is rectangular from the dotted line *z* to *z'*. From the said dotted line *z'* to the point *g* is the shank, which is a plain square, and from the point *g* to the dotted line *z* are formed long helical or oblique twisted fins or flanges *c*, springing from each one of the four angles or corners of the rectangular shank C. These fins, flanges, or ribs have longitudinal grooves *d* between them, which in cross-section are concave, and which terminate, like the said helical fins, flanges, or ribs, flush with the surface and angles of the shank C. Two of the fins, flanges, or ribs *c* terminate at the lower end of the spike at the acute angles of the double-beveled edge G, and the other two ribs *c* terminate at the highest points of the double-beveled edge which forms the said point.

It will be seen from the above description and the drawings, Fig. 1, that the dotted lines *x x* indicate the body of my spike as straight—that is to say, it has straight sides—and that the only taper is from the plane indicated by the dotted line *z*, which taper forms the edge or entering point.

At the upper terminus of the shank C, I form the head B, which for railroad purposes is constructed with an under-beveled lip, *b*, the plane of which bevel is obtuse to the longitudinal plane of that side of the shank C from which it extends. The sides *a a* of the head are flat and parallel to each other.

The spike is driven in the usual manner, and of course receives a movement about its longitudinal axis while it is being driven. When the spike is home the lip *b* will bind upon and firmly hold the base-flange of the T-rail. To remove an old rail the wrench is used and the head of the spike turned, say, one-quarter of a revolution, which clears the rail. When a new rail is set in place the same spike can be turned back over the rail-base and made to hold it tightly by reason of the under bevel or wedge form given to the lip *b*.

I have above described my straight helically-grooved spike as applicable to railroad-rails; but I do not confine myself to the use thus stated, as I contemplate its application to various purposes.

It is obvious that my spike may be made by any swaging, twisting, or forming machinery adapted to the purpose; and I contemplate making application for Letters Patent for machinery especially adapted for the purpose of making my improved spikes.

The expression "straight," as herein used, has reference to the axial line of the spike, which is of equal diameter and thickness when considered radially and taken from its axis to its greatest diameter from the shank to the plane indicated by the dotted line *z z*, from which plane, directed downward, are double-beveled sides which form the penetrating point.

Having described my invention, I claim—

A spike comprehending a head with straight parallel sides and upwardly-beveled hook or head, a rectangular shank or neck below the head, a spirally-grooved body in cross-section, rectangular and of uniform sectional area and twist, and a point which is double beveled, all combined and constructed to operate substantially in the manner and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 18th day of July, 1882.

WILLIAM H. BAILEY.

Witnesses:
J. J. McCARTHY,
EDWIN L. YERREL,