

GLOBE NAIL CO. *v.* UNITED STATES HORSE
NAIL CO. (TWO CASES.)

Circuit Court, D. Massachusetts. March 20, 1884.

1. PATENT—HORSE-SHOE NAIL—INFRINGEMENT.

Patent No. 92,355 for a horse-shoe nail made by cold-rolling the shank of a headed blank cut from a hot-rolled ribbed bar, *held* to be infringed by the manufacture of a nail produced in the same manner, except that the head is cold-rolled, and a small portion of the shank next to the head not rolled at all.

2. SAME—METHOD NOT SHOWN LN PREVIOUS PATENT;

The nail secured by letters No. 92,355 differs in hardness in its different parts; and the validity of the patent is not affected by the description in a previous patent of a method of manufacturing nails of uniform hardness throughout.

3. SAME—REISSUED PATENT NO. 5,207.

Reissued patent No. 5,207 *held* to be substantially identical with the original, No. 78,644, and therefore valid.

4. SAME—INFRINGEMENT—HORSE-SHOE NAILS.

The process described by reissue No. 5,207, of beveling the points of horse-shoe nails by spreading the metal laterally and then shaving off the superfluous projections, *held* to be infringed by a method purporting to force the metal upwards instead of sidewise

In Equity.

Chauncey Smith and *George L. Roberts*, for complainant

Browne, Holmes & Browne, for defendant.

Before LOWELL and NELSON, JJ.

NELSON, J. The first of these suits is for the infringement of patent No. 92,355, granted to Arlon M. Polsey, July 6, 1869, for an improved manufacture of nails. According to the description given in the specification, the invention consists in a horse-shoe nail, the head of which is in that condition of softness which is produced by hot-rolling the metal, and the

shank or body of which is hardened by rolling, when cold, with a constantly increasing pressure from head to point. A blank is first cut from a hot-rolled ribbed bar, the projection and form of the rib being that of the finished head of the nail. The blank, when cold, is submitted to a rolling process, which begins at or near the base of the head, and continues with a gradually increasing compression to the point. By this operation the rigidity of the body of the nail is left nearly uniform throughout its whole 820 length, since its cross-section diminishes in area from head to point in about the same ratio as the metal becomes harder under the increasing pressure. A nail is thus formed with the head sufficiently soft to yield under the hammer and imbed in the groove of the horseshoe, with the shank near the head hard enough to keep from bending, but not so hard as to prevent it from conforming readily to the nail hole, and with the point end so rigid as to retain its form and direction in driving. The single claim of the patent is this:

“A nail made by punching or cutting from hot-rolled ribbed bars of metal a headed blank, substantially as described, and by elongating, hardening, and compressing the shanks of such blanks by cold-rolling from the head to the point, thereby giving to all parts of the nail so produced the peculiar qualities specified.”

The nail manufactured by the defendant is made in the same manner, and is in all respects the same as the Polsey nail, except that in the case of the former the head is cold-rolled with diminishing hardness from the top to the base, and the cold-rolling of the body commences a short distance below the base of the head, thus leaving a small part of the shank next the head, described as about one-tenth of the length of the blank, unrolled. The position of the defendant is that these alterations in structure take its nail out of the claim of the patent. But we are unable to give to

them this effect. The leaving unrolled a small portion of the shank next the head, where in the patent the metal is left comparatively soft, so as to easily conform to the irregularities of the nail-hole, is manifestly only a trivial and unsubstantial variation from the Polsey nail. The same maybe said of the added hardening of the head. An attempt is made to show that by making the shank soft near the head the nail will drive and fit the nail-hole more readily, and that hardening the upper part of the head renders it better capable of resisting the wear of the pavement, and thus a more serviceable nail is produced. We think the evidence fails to prove this. But, if true, the new elements must be regarded as additions to the Polsey nail, and not as rendering the nail a substantially different article. A nail so constructed still possesses all the essential qualities of the Polsey nail. It is a nail made, by cutting a headed blank from a hot-rolled ribbed bar, and then elongating, hardening, and compressing the shank by cold-rolling, substantially from head to point, which is the invention described in the specification and claim of the patent.

The defendant further insists that the Polsey method is shown in the Whipple patents, No. 41,881 and No. 41,955, both anterior to the Polsey patent. The former is for a blank for horse-shoe nails, with the head of the form of the frustra of two pyramids having a common base, and the shank tapering therefrom to the point, the blank to be afterwards drawn out and flattened into a nail by a suitable machine or by hand. The latter is for a machine to produce such blanks by swaging, and to flatten and finish them into nails by rolling. We 821 have examined these patents with care, but find nothing in them resembling the Polsey invention. Whether the operations described for forming the blanks and nails are performed when the metal is hot or cold is not stated. But in either case the nail is left with an equal hardness throughout

the head and shank, and thus differs wholly from the Polsey invention.

In the second case the plaintiff sues for the infringement of reissue patent No. 5,207 dated December 31, 1872, and granted to the plaintiff, as assignee of S. E. Chase, for an improvement in finishing nails. The original of this patent was No. 78,644, dated June 6, 1868. The invention is described in substantially the same terms in the specifications of the original and the reissue. It relates to a method of finishing horse-shoe nails, and giving them the desirable curvature throughout the body and a beveled and pointed form at the end by means of mechanism. The method described consists of two successive operations. In the first the nail, when nearly finished, is submitted to the action of a die, which, by compression, gives to it the proper curvature flatwise and forms a bevel at the point, the superfluous metal being spread out by the pressure on each side and beyond the point end. In the second the nail is again subjected to the action of a die which forces it through an orifice in a bed, the die and orifice having corresponding outlines and the requisite dimensions and contour. The die and orifice together operate as shears to shear off and remove the superfluous metal spread out on the sides and point in the first operation, and to cut and trim the nail at its point to the exact form of the finished nail. In the first operation the nail receives its longitudinal curvature and its bevel at the point and is finished flatwise; and in the second the point is formed and the nail straightened and finished sidewise.

The original patent contained a single claim, as follows:

“I claim in finishing nails the process of curving their bodies and beveling their points, and afterwards forcing them through an open die to shear off

superfluous metal, substantially as and for the purpose specified.”

The reissue contains two claims, the second of which is thus stated:

“(2) The process of curving the bodies of nails and beveling their points by spreading the metal laterally, and afterwards forcing them through an open die to shear off superfluous metal, substantially as and for the purpose specified.”

We are unable to perceive any essential difference between the two claims. It is true the second claim of the reissue contains the expression, “by spreading the metal laterally,” which is not found in terms in the original claim. But the original claim, construed in the light of the description of the invention given in the specification, clearly implies that the lateral spreading of the metal in the die is the necessary result of the compression given in the first operation of the finishing. The two claims are therefore, in substance, the same, and the reissue is not invalid, at least in its second claim, as being a 822 departure from the original, within the rule established by the recent decisions of the supreme court.

The defendant does not claim that its manufacture differs from the Chase method, except in the following particulars: The beveling die and the groove in the roll are so constructed that the bevel is stamped or impressed in the metal; and the metal displaced by the operation, instead of being spread laterally, is forced partly upwards on each side and partly forward of the point. The superfluous metal is afterwards sheared off as in the Chase method. The hail is also formed without longitudinal curvature. We doubt if, in practice, the defendant has succeeded in effecting either of these variations. The samples of its finished nails in the case show a decided curvature lengthwise, and in many of the exhibits of its nails which have passed through the beveling operation only, inspection

plainly indicates a lateral spreading of the metal about the point. It is also obvious that it is mechanically impossible to impress the nail with the beveling die without at the same time spreading the metal under and on each side of it, to a greater or less extent, laterally. It is likewise true that the beveling, no less than the curving, operation of the Chase method is included in and secured by the patent. We are of opinion that the defendant's method of beveling the point is a substantial equivalent of the same operation in the Chase method. Exactly the same result is produced in both cases. The defendant's nail, when finished, cannot be distinguished in any of its features from the Chase nail. The slight difference in the process is immaterial. The two are in substance identical.

Other defenses are that the Chase invention was anticipated in the Gooding patent, No. 5,489, dated March 28, 1848, and in the Polsey patent, No. 62,682, dated March 5, 1867. These inventions were among the first rude attempts in the art of producing horse-shoe nails by machinery. The evidence shows that they were never of any real utility, and were never put to any practical use in making nails. In the specifications of the Chase patent the inventor refers to the Polsey patent, No. 62,682, and carefully distinguishes his invention from its scope. It is sufficient to remark that we find nothing in either of these patents which describes the simple and effective processes of the Chase invention.

The entry in each case will be decree for the complainant.