

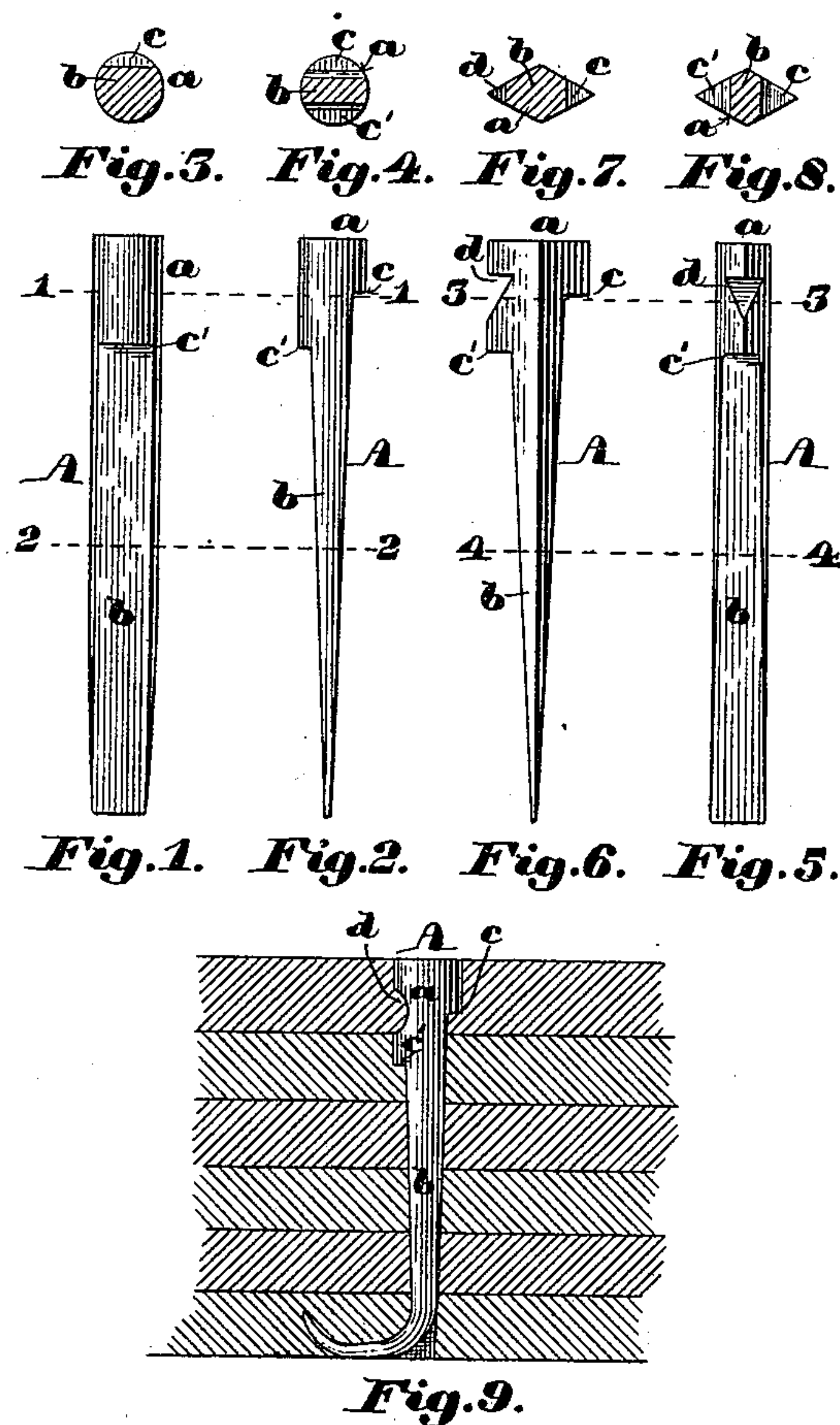
(No Model.)

O. R. CHAPLIN.

SHOE NAIL.

No. 335,563.

Patented Feb. 9, 1886.



Witnesses:
Walter E. Lombard.
Frank C. Gray

Inventor:
Orril R. Chaplin,
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Attorney.

UNITED STATES PATENT OFFICE.

ORRIL R. CHAPLIN, OF BOSTON, MASSACHUSETTS.

SHOE-NAIL.

SPECIFICATION forming part of Letters Patent No. 335,563, dated February 9, 1886.

Application filed June 5, 1885. Serial No. 167,744. (No model.)

To all whom it may concern:

Be it known that I, ORRIL R. CHAPLIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Shoe-Nails, of which the following, taken in connection with the accompanying drawings, is a specification.

Nails for use in uniting leather-work—as, for instance, in securing the soles or heels of boots or shoes to their uppers—have for some time been in common use, which are made from a continuous wire by having one or more of their sides flattened for a portion of their lengths, in order to form at one end tapered shanks to be driven into the material used, and at the other end thereof short heads provided with suitable shoulders on their under sides, between which and the clinched ends of their tapered shanks the material may be clamped; but as in order to properly clamp the material the shoulders on the under sides of the heads should not pass through the outer lip of said material, the head is necessarily made comparatively short, on account of which said heads are the more quickly worn away, and when this is accomplished it often occurs that the tapered shank will not hold the remaining lifts, and they become loosened and come off, which difficulty it is very desirable to overcome.

To overcome this objection is the object of my present invention, which consists in a nail having a projecting head on different sides thereof, the under side of each being at a different distance than the others from the pointed end of said nail, all as will be fully understood by reference to the description of the drawings and to the claims, to be hereinafter given.

Of the drawings, which are all drawn to an enlarged scale, Figure 1 represents a front elevation of one of my improved nails. Fig. 2 represents a side elevation of the same. Fig. 3 represents an inverted sectional plan of the same, the cutting-plane being on line 1 1 on Figs. 1 and 2. Fig. 4 represents an inverted sectional plan of the same, the cutting-plane being on line 2 2 on Figs. 1 and 2. Figs. 5 and 6 represent, respectively, a front and a side elevation of my improved nail, made from a wire or rod having flat sides. Figs. 7

and 8 represent inverted sectional plans of the same, the cutting planes being, respectively, on lines 3 3 and 4 4 on Figs. 5 and 6; and Fig. 9 represents a section of a number of lifts of a heel with one of my improved nails set therein.

In the drawings, A is a shoe-nail, made from a round or polygonal wire or rod, and having a head, *a*, of a shape in cross-section similar to that of the wire from which it was formed, while below the head *a* a portion of the wire on opposite sides thereof has been cut away to produce a flattened tapered shank, *b*, the lower end of which may be made more or less sharp, according to the material into which it is to be driven.

To form two flattened sides of the shank *b*, portions of the wire are cut away upon opposite sides thereof to different distances from the pointed end of the nail, thereby forming at the junctions of said sides with the under side of the head *a* the shoulders *c* and *c'*, respectively, (as shown in Figs. 2 and 6,) at different distances from the face of the head, which distances may be regulated by the kind and thickness of material in which the nail is to be driven.

This nail may be made from a round or polygonal wire by milling or dieing, or it may be struck up from any suitably-shaped blanks by dies without altering the principles of my invention. The distance between the shoulders *c* and *c'* is such that one shoulder, *c*, will only enter the outer lift and clamp that against the remaining lifts, while the second shoulder, *c'*, will pass entirely through the outer lift and enter the one next to it and firmly clamp that against the other remaining lifts, and it will continue to hold said lift even after the outer lift has been entirely worn away, which would not be the case when those nails were used which had their shoulders *c* and *c'* at the same distance from the pointed end of the nail, as from the necessity of the case the shoulders *c* and *c'* should not pass through the outer lift, and therefore when that lift and the shoulders *c* and *c'* were worn away there would be nothing but the slight taper of the shank to hold the lifts together. A notch, *d*, is cut into the side of the head *a* as an additional shoulder,

inasmuch as, in consequence of the moisture and pressure following the wearing of the shoe, the leather of the outer lift is expanded laterally and packed into said notch, thus making
5 an additional shoulder or holding-surface. This notch *d* in some cases may be dispensed with.

Nails have been cut from a continuous wire having a shoulder or head only upon one side,
10 and the shank being formed by cutting away the surplus metal all from one side of the wire, the cut which separates the nail from the wire extending diagonally from the shoulder across the wire to its periphery, so that
15 the point of the nail is in line with one side of the wire.

Nails formed as last described, by cutting the stock away all from one side, and the line of the cut extending to the periphery of the
20 wire, are objectionable on account of the liability of the nails to take a turn outward through the vamp before it pierces the inner sole, as it often does.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A nail having a projecting head, the under sides of which upon different sides of the nail are at different distances from the ends of the nail.

2. A nail having a flattened tapered shank and a head, the under sides of which on opposite sides of said shank are at different distances from the pointed end of said shank, said head being provided with a notch cut in the side thereof to serve as an additional
35 shoulder.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 2d day of June, A. D. 1885.

ORRIL R. CHAPLIN.

Witnesses:

WALTER E. LOMBARD,
GEO. E. MITCHELL.