

(Model.)

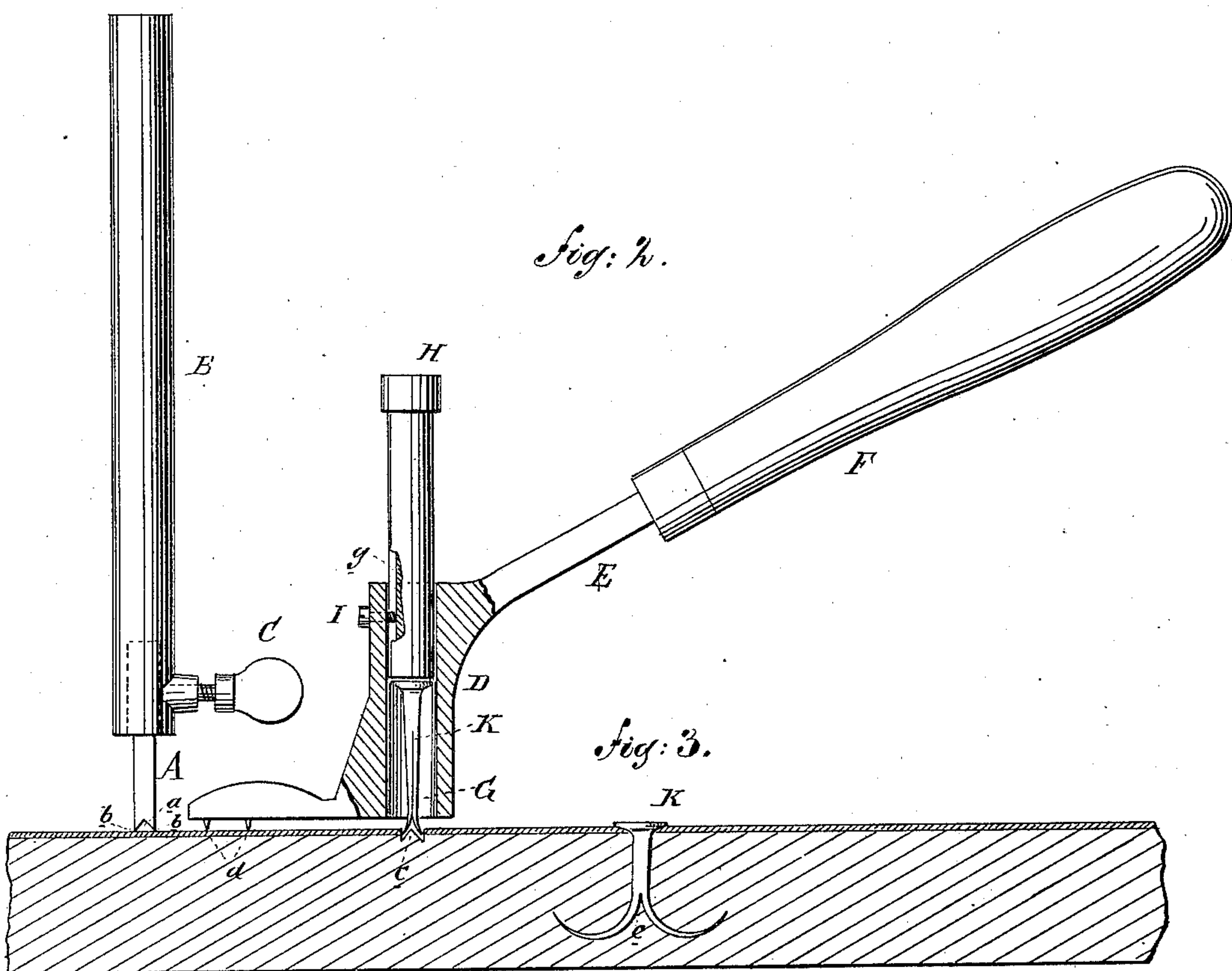
C. P. BALL.

Process and Tool for Driving and Clinching Nails.

No. 231,979.

Patented Sept. 7, 1880.

*Fig: 1.*



*Fig: 2.*

*Fig: 3.*

*Fig: 4.*



WITNESSES:

*Chas. Nida.*  
*C. DeGruen.*

INVENTOR:

*C. P. Ball*

BY

*Munn Ho*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CHARLES P. BALL, OF DANVILLE, KENTUCKY.

## PROCESS AND TOOL FOR DRIVING AND CLINCHING NAILS.

SPECIFICATION forming part of Letters Patent No. 231,979, dated September 7, 1880.

Application filed May 22, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, CHARLES P. BALL, of Danville, in the county of Boyle and State of Kentucky, have invented a new and Improved  
5 Process and Tool for Driving and Clinching Nails, of which the following is a specification.

The object of this invention is to drive and clinch nails at any desired depth.

The invention consists in a driving and  
10 clinching tool and an improved method of forming the nail-hole, applying the nail, and clinching it, as hereinafter described.

Figure 1 is a vertical side elevation of the instrument for making the nail-holes. Fig. 2  
15 is a side elevation, partly in section, of the instrument for applying the nail, showing also a nail in position. Fig. 3 represents a side elevation of a nail driven and clinched. Fig. 4 is a modification of the instrument for making  
20 the nail-hole.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the instrument for making the hole for a double-pointed  
25 nail, said instrument being simply a slender bar of steel or other metal with its lower edge notched in the shape of a letter, A, as shown at *a*, so as to present two points, *b b*. Said instrument or tool A is held in the socket of a  
30 handle, B, by means of the thumb-screw C. A nail-hole is made by applying this device vertically, as shown at Fig. 1, and striking with a hammer on the top of the handle B, by which means a hole is formed in wood or other sub-  
35 stance, said hole having a triangular burr or point projecting upward from its bottom, as shown at *c*.

D represents the tool for applying the nail to the hole made by the tool A. Said tool consists of a metal shoe, D, provided with a shank,  
40 E, and a handle, F, that are set at an angle of about forty-five degrees to the shoe proper. A vertical opening, G, extends entirely through the leg of the shoe, and the bottom of the toe of the shoe D is provided with several sharp  
45 studs, *d*, to hold the tool in place.

After a hole has been made by the tool A a nail, K, is applied thereto—in this instance a double-pointed nail—so that its points shall  
50 straddle the burr *c*, and the opening G of the tool D is then set over said nail K, the said tool D being pressed down, so that its studs *d* shall hold

in the surface of the substance through which the nail is to be driven. The plunger H, which forms part of the tool D and is held vertically  
55 movable in the opening G by means of the set-screw I, that enters laterally into the slot *g* in said plunger H, then resting on the head of said nail K, is then struck with a hammer, with the effect of driving said nail K, and the points  
60 of said nail, passing down on either side of the triangular projection *c* in the nail-hole, are thereby inclined upward and clinched, as shown at Fig. 3.

A modification of the instrument or tool A, 65 designed for forming holes for the clinching of ordinary single-pointed nails, is shown in Fig. 4.

The tool D is of especial service in holding the nail in position while being driven and accurately guiding it, so that the points of the  
70 nail shall go on either side of the projection or burr *c*.

This apparatus and process are especially adapted for the application of nails of either  
75 single or double points in putting on sheet-metal roofs and in all work where strength and durability are desired.

The depth at which the nail shall clinch is determined by the depth of the hole made by  
80 the tool A.

I am aware that it is not new in a nail-driving machine to feed the nails to the magazine by a spring-pusher driven by a punch on the end of a spring-lever, or to feed by a spring-  
85 plunger.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A process of applying and clinching double-pointed nails, which consists in forming a  
90 nail-hole partially through the stock to be united with a central projection in its bottom, and applying the nail to said hole, so that the double point will straddle said projection, the  
95 nail being then driven, as described.

2. In an apparatus for driving and clinching nails, the tool or instrument A, provided with a notched point, substantially as and for the purpose specified.

CHARLES P. BALL.

Witnesses:

JAMES B. McFERRAN,  
R. M. DREW.